

NOTES
ON
Practical Hydrotherapy

*In Use by the Battle Creek Sanitarium and
Hospital Training School for Nurses*

Based Upon
"Rational Hydrotherapy"
by
Dr. J. H. Kellogg

Battle Creek, Mich.
1922

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OUTLINES
OF
Practical Hydrotherapy

*Especially Arranged for Use in
Schools of Nursing*

Based Upon
"Rational Hydrotherapy"
by
Dr. J. H. Kellogg

THE MODERN MEDICINE PUBLISHING CO.

Battle Creek, Mich.

1922

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Foreword

This little volume of notes and memoranda are the result of twenty years' experience in the teaching of pupil nurses in the Battle Creek Sanitarium Training School for Nurses.

The notes are based upon Dr. Kellogg's "Rational Hydrotherapy," which is indispensable for use as a text book in connection with the "Outlines." Other works by the same author, particularly "The Itinerary of a Breakfast," "Colon Hygiene," and "The Health Question Box," will be found valuable aids in the practical application of hydiatic and other physiologic measures.

Special thanks are due to Drs. Paul and Linda Roth, Mrs. Mary Foy, Miss Leona Sweet and others who have rendered great service in the preparation of the notes and outlines.

PUBLISHERS.

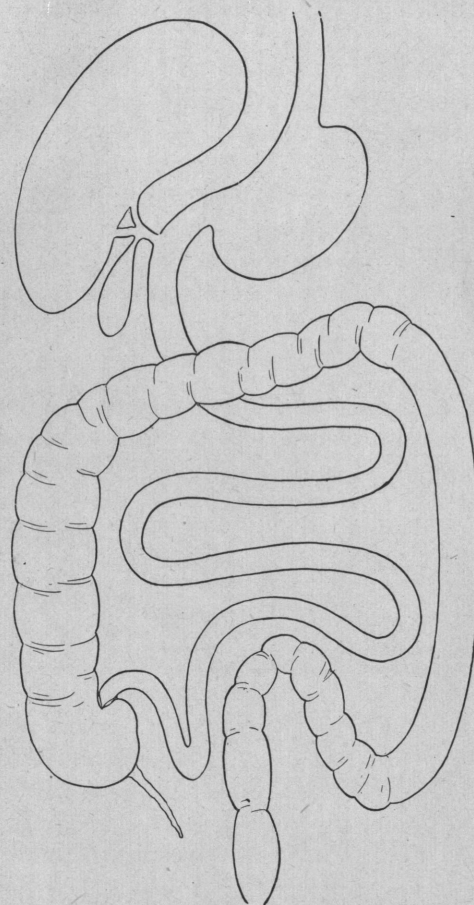


Diagram Showing Normal Colon and
Ileocecal Valve

Outlines of Practical Hydrotherapy

These outlines and memoranda are based upon "Rational Hydrotherapy" by Dr. J. H. Kellogg to which references are made by page number. Temperatures are indicated by the Fahrenheit scale.

Definition—Hydrotherapy relates to the application of water at definite temperatures and by exact procedures to the skin or mucous membrane for the prevention of disease, or the treatment of the sick.

The Enema

Definition—An enema or clyster consists in the introduction of a quantity of liquid into the colon.

1. ARTICLES NECESSARY FOR GIVING AN ENEMA IN A WARD OR ROOM:

1. Support
2. Enema can
3. Enema tube
4. Douche pan
5. Antiseptic lubricant (carbulated vaseline)
6. Pad for pan
7. Newspaper
8. Thermometer
9. Toilet paper
10. Slop jar

2. GENERAL DIRECTIONS:

1. Be particularly careful in the preparation of medicated enemata. Prevent errors and accidents by keep-

ing all bottles plainly labeled and by being sure you are using the right ingredients in correct quantities.

2. Never use the hand unless scrupulously clean to dissolve soap or materials used in the enema.

3. It is best for the patient to be undressed. If dressed, loosen all bands.

4. See that the patient's feet are warm.

5. Place the patient in position, usually lying on back.

6. Cleanse the can and measure the water into it.

7. Unclasp stop cock and let water run until all air is expelled from the tube, then lubricate.

8. Take the temperature of the water.

9. Let the patient insert the tube unless helpless.

10. Introduce the water slowly, enema can $1\frac{1}{2}$ feet above the patient, especially when the enema is to be retained.

11. When there is such weakness of the sphincters that the water cannot be retained, place a napkin or a piece of cheesecloth around the tube and press against the anus while the water flows in.

12. Enema tubes must be thoroughly washed before using and washed and disinfected after using.

13. To clean and disinfect enema and V. I. tubes, collect in 5% formalin and wash with soap. Boil five minutes in soda water, keep in 2% formalin, rinse and lubricate before using.

14. When the enema is given in bed to a helpless patient, proceed as follows:

Patient at one side of the bed, place on the other side three pillows at the head, two at the shoulders, one at

the back. Spread two or three layers of newspapers and place the bed pan over them with the upper end resting on the lower pillow, a small cotton pad or folded newspaper is placed on the pan. When all necessary articles are ready and placed within easy reach, two or three attendants lift the patient while another standing on the side opposite slides pillows, paper, pan and all under the patient who is then carefully lowered onto the pan in proper position. The knees are bent and if necessary supported by a pillow under each. To prevent soiling the bed, place a folded newspaper at the front of the bed pan while the enema is being evacuated.

1. WARM ENEMA (EN)

a. Quantity—1-2 pints.

b. Temperature—98-102 deg.

c. Repeat until the water is clear, making temperature 90 deg. F., after first enema.

d. Empties colon, introduces water into the system if retained.

2. HOT ENEMA (H EN)

a. Quantity—1-2 pints.

b. Temperature—102-105 deg.

c. Repeat if necessary, lowering temperature, 10-15 deg. F.

d. Indications—Surgical shock, collapse, lowered blood pressure, pulse feeble, deficient activity of kidneys or liver; colic, pain, spasm, colitis, rectal, bladder and pelvic inflammation.

3. COOL ENEMA (C EN)

a. Amount—1-2 pints.

b. Temperature—75-90 deg.

- c. Repeat once or twice if necessary.
 - d. Indications—High temperature, deficient activity of liver or kidneys; use after constipation.
4. COOLING ENEMA (CL EN)
- a. Preceded by warm enema.
 - b. Amount—1-2 pints.
 - c. Temperature—70-80 deg. When water at the above temperature excites premature expulsive efforts, begin the first injection at a temperature of 100 deg. and gradually cool to about 80 deg.
 - d. Use a small colon tube or large soft catheter. Do not introduce more than four inches. Retain enema 5-15 min. Each succeeding injection is to be retained a little longer than the preceding one.
 - e. Leave the tube in position throughout the treatment and when the water is to be expelled, simply disconnect it from the rubber tube on the can.
 - f. Indication—To lower temperature. Also supplies water.
5. GRADUATED ENEMA (GRAD EN)
- a. Quantity—2-3 pints at first.
 - b. Temperature—80-90 deg. at beginning.
 - c. Reduce the quantity of water by one-half a cup each day and the temperature 2 deg. until about one cupful of water at 60 deg. is used.
 - d. Indication—to overcome the enema habit and restore normal tone and sensibility of lower bowel and rectum.
6. HIGH CLYSTER (H. Cl.) or (Ccl.)
- a. Always precede with a warm enema.
 - b. Quantity—1-3 pints.

- c. Temperature—80-105 deg. (usually 90-100).
 - d. Place patient in the knee-chest or right Sim's position.
 - e. Use ordinary enema tube unless otherwise ordered.
 - f. Knead the bowels over the course of the colon to facilitate complete evacuation.
 - g. Repeat if necessary.
 - h. Indication—To thoroughly empty the colon, when the ordinary enema fails. Seldom needed.
7. SOAP ENEMA (Soap En)
- a. Quantity—1-2 pints of strong soapsuds made from Ivory or castile soap.
 - b. Temperature—100 deg.
 - c. Repeat until successful.
 - d. Follow by a plain enema at 90 deg.
 - e. Indication—To cleanse the bowels, when ordinary enema fails; facilitates the evacuation of the bowels.
8. OIL ENEMA (Oil En)
- a. Quantity—2-8 oz. of sweet vegetable oil (cottonseed, linseed, peanut, olive) or paraffin oil which is much to be preferred. Avoid rancid oil.
 - b. Temperature—100 deg.
 - c. Knee-chest or right Sim's position. Retain 2 hours, or over night.
 - d. Indication—For hardened feces—also used after operations for hemorrhoids and for colitis.
9. RECTAL IRRIGATION (Rectal Irr)
- a. Precede by warm enema.
 - b. Use hard rubber irrigating tube and normal saline solution (2 rounded teaspoons of salt to quart of water).

c. Hot irrigation—105-115 deg. for 5-10 min. To relieve irritation or spasm.

d. Cold irrigation—40-60 deg. for 5-20 min. Repeat every hour or two. To allay acute inflammation (inflamed hemorrhoids).

e. Alternate hot and cold: 15 sec. each for 15 min. Use two cans connected with a Y tube. For constipation; due to loss of rectal sensibility and for chronic proctitis.

10. SALINE ENEMA (Sal En)

a. Precede by warm enema.

b. Medication—One teaspoonful of salt to each pint of water (and half oz. of malt sugar).

c. Quantity—1-3 pints.

d. In surgical cases, temperature 110 deg.

e. To be retained, temperature 100 deg. F.

f. Indication—Shock, collapse, colitis, rectal irritation.

11. FLAXSEED ENEMA (Flaxseed En)

a. Precede by warm enema.

b. Medication— $\frac{1}{2}$ tsp. of flaxseed to a pint of water. Tie in a cheesecloth bag and boil one hour.

c. Quantity—4-8 oz.

d. Temperature—100 deg.

e. Retain as long as possible, without inconvenience, $\frac{1}{2}$ hour or more.

f. Indication—Irritation of rectum or colon.

12. STARCH ENEMA

a. Precede by a warm enema.

b. Medication—1 tsp. of cornstarch to $\frac{1}{2}$ pint of boiling water.

c. Quantity—4-8 oz.

d. Temperature—100 deg.

e. Retain as long as possible without inconvenience, $\frac{1}{2}$ hour or more.

f. Indication—Irritation—tenesmus.

13. GLYCERINE ENEMA

a. Precede by a warm enema.

b. Medication—4 oz. glycerine (by measure 6 tbsp.) to one pint of water.

c. Temperature—70 deg.

d. Indication—To stimulate action of the bowels.

14. TURPENTINE ENEMA (Turpentine En). Now seldom used. Turpentine sometimes causes albumenuria.

a. Precede by a warm enema.

b. Medication—20 drops of turpentine to one pint of soapsuds.

c. Temperature—70-100 deg. F.

d. Follow by plain enema at 90 deg.

e. Indication—Constipation with much gas in the bowels.

15. MAGNESIUM SULPHATE ENEMA (Mag. Sulph. En)

a. Precede by a warm enema.

b. Medication—4 drams of magnesium sulphate (Epsom salts, by measure 3 even tsp.), 4 drams of glycerine.

c. $\frac{1}{2}$ pint of boiling water.

d. Double the size of the enema in obstinate cases.

e. Temperature—70-80 deg. In surgical cases, 90 deg.

f. Repeat if necessary.

g. Indication—To stimulate action of the bowels.

16. MELTOSE OR MOLASSES ENEMA (Meltose En)

- a. Precede by a warm enema.
- b. Medication— $\frac{1}{2}$ pint of Meltose or molasses in $\frac{1}{2}$ pint of hot water or soapsuds.
- c. Temperature—100 deg.
- d. Stimulates action of bowels.
- e. Follow by plain enema after the bowels have moved.

17. NUTRITIVE ENEMA

- a. Wash out the bowels with a soapsuds enema followed by an enema at 90 deg., $\frac{1}{2}$ hour before giving the nutritive enema.
- b. 2 oz. of malted nuts (by measure 6 rounding desertspoonfuls) in 6 oz. of water. Boil 5 min., cool, then add two beaten egg yolks and 20 grains of salt.
- c. Temperature—100 deg.
- d. Use small colon tube, or large catheter.
- e. Retain.
- f. Repeat every four hours, after cleansing bowel by enema.

18. YOGURT WHEY ENEMA (Whey En)

- a. Precede by a warm enema.
- b. Quantity— $\frac{1}{2}$ pint to 2 pints of fresh and not very acid, whey.
- c. Temperature—80-100 deg.
- d. Retain as long as possible without inconvenience.
- e. Indication—Colitis, intestinal toxemia; foul stools.

19. TANNIN ENEMA

- a. Precede by a warm enema.
- b. Medication—2 drams of tannin (by measure 6 rounding tsp.) in 1 qt. of water.

- c. Temperature—100 deg.
- d. Retain as long as possible without discomfort— $\frac{1}{2}$ hour or more.
- e. Indication—Colitis or diarrhea.

20. SODA ENEMA

- a. Medication—1 tbsp. soda in 1 qt. of water.
- b. Temperature 98-106 deg.
- c. Indication—To relieve acidosis.

Vaginal Irrigations

GENERAL DIRECTIONS

1. Dorsal Position.
2. Douche can should be at an elevation of 2-4 ft. (In pregnancy 18 in.)
3. The temperature must be very accurately noted.
4. Use vaginal tube with side openings.
5. Add 2 tsp. of salt to each qt. of water in plain irrigation.

1. VAGINAL IRRIGATION (V I.)

- a. Quantity—2-4 quarts of water.
- b. Temperature—100-110 deg.
- c. Indication—Cleansing.

2. HOT VAGINAL IRRIGATION (H V I)

- a. Quantity—2-4 quarts.
- b. Temperature—110-120 deg.
- c. Indication—Pelvic inflammation; cystitis; menorrhagia.

3. COLD VAGINAL IRRIGATION (C V I)

- a. Quantity—2-4 pints.
- b. Temperature—70-50 deg.
- c. Indication—Relaxation.

4. ALTERNATE VAGINAL IRRIGATION (Alt V I)

- a. Temperature—110-120 deg.—15 sec. 75-85 deg.—10 sec. Alternate for 5 min.
- b. Indication—Very chronic pelvic exudates.

5. SOAP VAGINAL IRRIGATION (Soap V I)

- a. 1 pint of 1% green soap solution.

- b. Temperature—100-105 deg.
 - c. Wrap the tube lightly with cheesecloth and swab the vagina very carefully while the water flows.
 - d. Follow by plain V. I.
 - e. Indication—Very chronic leucorrhoea with profuse secretion but without irritation; preparation for surgical operations.
6. PERMANGANATE VAGINAL IRRIGATION (P V I)
- a. Precede by a plain V. I., 105 deg., unless otherwise ordered.
 - b. Medication—1 tsp. saturated solution of potassium permanganate to 1 pint of water.
 - c. Indication—Deodorant, disinfectant for leucorrhoea.
 - d. Temperature, unless otherwise ordered, 80 deg.
 - e. Oxalic acid solution (poison) will remove stains from hand and clothing.
7. DISINFECTANT VAGINAL IRRIGATION (D V I) (poison).
- a. Precede by a plain V. I.
 - b. 1-2 quarts of 1-8000 bichloride of mercury, use $\frac{1}{4}$ of a tablet to a quart of water.
 - c. Temperature—110-115 deg.
 - d. Follow by a plain V. I. in obstetrical cases.
8. ALUM VAGINAL IRRIGATION (A V I)
- a. Precede by a hot V. I. same temperature as alum V. I.
 - b. Medication—Equal parts saturated solution of alum and water:
 - c. Temperature—110-120 deg.

- d. If necessary, repeat and use full saturated solution of alum.
 - e. Indication—Hemorrhage, and profuse or prolonged menstruation.
9. IODINE VAGINAL IRRIGATION (I V I)
- a. Medication—1 tsp. tincture of iodine to three pints of water.
 - b. Temperature—105-110 deg.
 - c. Indication—Offensive vaginal discharge.
10. LYSOL VAGINAL IRRIGATION (L V I)
- a. Medication—1 tsp. Lysol to 1 qt. of water.
 - b. Temperature—105-110 deg.
 - c. Follow by plain V. I. in obstetrical cases.
 - d. Indication—Cleansing and disinfection.
11. SODA VAGINAL IRRIGATION (S V I)
- a. Medication—1 tbs. bicarbonate of soda to a qt. of water.
 - b. Temperature—105-115 deg.
 - c. To counteract acid discharge from the uterus.
 - d. Indication—Acid vaginal discharge.
- NOTE.—Two oz. (6 heaping teaspoonfuls) of crys. potassium permanganate to one qt. of water makes a saturate solution.
- Three and one-half oz. (6 heaping dessertspoonfuls) of alum to 1 qt. of water makes a saturate solution.
- Three oz. oxalic acid crys. to one qt. of water makes a saturate solution.

Oil Rub (O R)

General order of applications—Arms, legs, chest and abdomen, back.

PROCEDURES:

1. Apply lubricant 3
2. Centripetal and rotary friction..... 3
3. Centrifugal stroking 3

ARMS:

1. Apply lubricant with a long stroke from finger tips to shoulder, returning with four rotary sweeps—3.
2. Beginning at tips of the fingers, make heavy passes to palm and back of hand simultaneously, then with the hands encircling the arm, make heavy passes from wrist to axilla, sweeping the outer hand over point of shoulder—3.
3. Centrifugal strokes from shoulder to finger tips—3. Very light.

LEGS:

1. With leg flexed and the hands working together, apply lubricant with a long stroke from foot to hip, returning with four rotary sweeps—3.
2. *Foot:*
 - a. Leg extended, heavy centripetal stroking simultaneously to the side with the fingers, and to the sole with the palm—3.
 - b. Stroking to dorsum—3.
 - c. Rotary strokes to heel—6.

Leg:

a. Leg flexed, with one hand on knee, with the other apply heavy friction to the calf of the leg, from ankle to knee, then with both hands encircling the limb, thumbs anterior, manipulate the thigh from knee to hip, covering the anterior surface and sides with firm pressure—3.

3. Finish with long centrifugal strokes from hip to toes—3.

CHEST AND ABDOMEN:

1. Apply lubricant with long strokes up center, four rotary sweeps down the sides, hands well spread so as to cover whole surface—3.

2. a. Stroke downward over the sterno-mastoid muscles—3. b. From ears to shoulder—3. c. From shoulders to sternum—3. d. Around the breasts—6. e. With thumbs and thenar surfaces make heavy stroking outward from the median line over the ribs and abdomen, three at each point, advancing downward to pubes. Stroking up over sternum, out to elbow, coming back with a firm stroke on the arms and down the sides—3.

3. Finish with light strokes up over sternum and down the sides of the trunk—3.

BACK:

1. Apply lubricant with long strokes up center, four rotary sweeps down the sides, including hips—3.

2. *Back:*

a. Down the back of neck—3.

b. From ears to shoulders—3.

c. Transverse wringing of whole back, three times in each area from neck to hips.

d. Starting at the sacrum, pass up each side of the spine with a zigzag movement applied with the tips of the fingers, then out to the elbows, coming back with a firm stroke on the arms and down the sides—3.

Hips:

a. Transverse friction with alternate strokes across the buttocks, right to left, covering the surface systematically—3.

b. Stroking from the median line outward over the fleshy parts, covering the whole surface—3.

c. Rotary movement starting at the median line, describing large circles with one hand on each side and covering the whole surface—3.

3. *Back:*

a. Light stroking up center of the back and down at the sides—3.

b. Alternate stroking the whole length of the spine—6.

Legs:

a. Treat the two legs at once. Long strokes from heels to hips with firm pressure, thumbs inside, covering the posterior surface of legs and thighs—3.

Talcum Powder Rub (T R)

1. Given exactly like oil rub, using talcum powder as a lubricant.

2. Often given in preference to the oil rub in warm weather when the skin is oily, or when the patient objects to the oil.

Dry Hand Rub (D H R)

1. Given the same as the oil rub but without lubricant.

2. More stimulating to the circulation of the skin than the oil or powder rub.

The figure indicates the number of times the complete manipulation or movement is to be executed.

Centripetal Rub (Cp r)

GENERAL ORDER:

1. Light friction 1
2. Apply lubricant 2
3. Centripetal and rotary friction..... 3
4. Percussion 2
5. Centrifugal strokes 3

ARM:

1. Beginning at finger tips, give light, quick to and fro friction to the shoulder and back to the hand, being sure to thoroughly cover the whole surface.

2. Apply lubricant with a long stroke from finger tips to shoulder, returning with four rotary sweeps—2

3. *Hand:*

a. Heavy centripetal stroking to back of head—3.

b. Palm same as back of hand—3.

Arm:

a. Empty blood vessels of inside of arm by heavy even passes from the wrist to axilla—3.

b. Repeat to outside of arm sweeping hand out over the shoulder—3.

4. a. Percussion up and down the external surface—2.
b. Percussion of internal surface—2. Percussion of hand—3.

5. Centrifugal strokes from shoulder to finger tips—3.

LEGS:

1. Leg flexed, apply one hand on the sole, the other on the dorsum of foot, light, quick to and fro friction to the foot, the calf of the leg, upper surface of thigh, then back to the knee, under surface of thigh, back to the knee, down the calf of the leg to the ankle—3.

2. Hands working together, apply lubricant, with a long stroke from foot to hip, returning with four rotary sweeps—3.

3. *Foot:*

a. Leg extended, heavy centripetal stroking simultaneously to the side with the fingers and to the sole with the palm—3.

b. Stroking the dorsum—3.

c. Rotary strokes to heel—6.

Leg:

Leg flexed, one hand on knee, for support, with the other give heavy friction to calf of the leg, ankle to knee, then with both hands encircling the limb, thumbs anterior and meeting, manipulate the thigh from knee to hip, covering the anterior surface and sides—3.

4. Percussion—2.

5. Long centrifugal strokes from hips to toes—3.

CHEST AND ABDOMEN:

1. Light, quick, to and fro friction to areas above clavicles, then below clavicles, down sides of the chest and abdomen, back to neck, up the center, covering the whole surface thoroughly—1.

2. Apply lubricant with long strokes up center, four rotary sweeps down sides, covering whole surface—2.

3. a. Stroke downward over the sterno-mastoid muscles—3.

b. From ears to shoulders—3.

c. Strokes from shoulders to median line over the pectoral muscles—3.

d. Alternate strokes to each breast—6.

e. With thumb and thenar surfaces give heavy stroking outward from median line over the ribs and abdomen, three at each point, advancing downward to pubes.

f. Stroke upward over the sternum, out to elbows, coming back with firm stroke on the arms and down the sides—3.

4. Have patient take a deep breath and hold while making light percussion up and down left side, same to right side—2.

5. Light stroking up center and down sides—3.

BACK:

1. Friction same as to chest and abdomen—1.

2. Apply lubricant, long strokes up center, four rotary sweeps down sides, including hips—2.

3. a. Strokes down back of neck—3.

b. From ears to shoulder—3.

c. Large, heavy rotary sweeps to scapulæ—3.

d. Transverse wringing of whole back, from neck to hips—3.

e. Starting at the sacrum pass up each side of the spine with a zigzag movement applied with the tips of the fingers, then out to the elbows, coming down with a firm stroke on the arms and down the sides—3.

Hips:

a. Transverse friction with alternate strokes across the hips, right, left, covering the surface systematically—3.

b. Stroking from median line outward over the fleshy parts, covering the whole surface—3.

c. Rotary movements starting at the median line, describing large circles with one hand on each side and covering the whole surface—3.

4. Percussion up and down the right side, same to the left, covering back and hips—2.

5. a. Light stroking up center of the back and down the sides—3.

b. Alternate strokes the whole length of the spine—6.

Legs:

a. Long strokes from heels to hips with firm pressure, thumbs inside, covering the posterior surface of legs and thighs; treat both legs at once—3.

Dry Shampoo (D sh) Dry Friction (D Fr)

1. Use dry flesh brush or loofah. If skin is sensitive, wet the loofah and dry thoroughly.

2. To prevent infection, the patient's skin must be clean and the brush sterilized for each treatment.

3. Rapid to and fro friction with the brush to the whole surface of the body in the following order: Arms, legs, chest, abdomen, back, and hips.

4. Indication—Dry, inactive skin.

5. Follow by oil rub.

Witch Hazel Rub (Wzr)

1. Required—2 or 3 oz. of 50% witch hazel.

2. Take about two teaspoonfuls in the hollow of the hand and apply to the body in the following order: Chest, abdomen, arms, legs and back.

3. Follow each application with firm stroking until the part treated is dry.

4. Repeat the application if necessary.

5. In some cases it is well to fan the skin at intervals.

6. Indication—Excessive perspiration; night sweats.

Foot Baths (Ft b)

"Hydrotherapy," pp. 753-758

The therapeutic action of the foot bath is due to reflex and derivative effects produced through the temperature nerves—hot and cold. The reflex effects are the opposite of the derivative effects.

Reflex effects are the effects produced in near or distant parts through nervous impulses set up in the temperature nerves and conveyed from the surface area treated to the part reflexly related to it.

Derivative effects are the effects produced upon the blood supply of more or less distant parts as the result of the increased or decreased blood current in the surface treated.

GENERAL DIRECTIONS:

1. Protect the patient with a blanket or a sheet covering the whole body, including the knees and also the tub.
2. Always have the feet warm before giving a cold foot bath.
3. On removing the feet from the bath dash cold water over them.
4. Dry feet thoroughly, especially between the toes and the soles, and put on slippers immediately.
5. Caution—Never give cold foot baths during the menstrual period, or in cases of acute pelvic, renal or abdominal inflammation.

COLD FOOT BATH (C Ft B.)

1. See that feet are warm.
2. Quantity—two or three inches deep in the tub.
3. Temperature—45-65 deg.
4. Duration—1-4 min.
5. Apply friction continuously while in the bath.
6. Effect: Reflex and derivative. Contracts the blood vessels of the brain, stomach, and liver, followed by reaction in the same areas and feet, with increased movement of blood. "Hydrotherapy," p. 753.

SHALLOW FOOT BATH (Shal Ft B)

1. Quantity—Just sufficient water to cover soles of feet and the toes.
2. Temperature—45-65 deg.
3. Place feet in water for $\frac{1}{2}$ min.
4. Remove one foot and give friction to it $\frac{1}{2}$ min., then replace in bath.
5. Same to the other foot.
6. Duration—Repeat until the whole skin surface of the feet is reddened.
7. Dry thoroughly and give vigorous percussion to soles.
8. Effects: Reflex and derivative. Hydrotherapy, p. 755.

RUNNING OR FLOWING FOOT BATH (Flow Ft B):

1. Patient stands in a tub so arranged that water can flow in and out continuously.
2. Cold water is made to run over the patient's feet while the dorsum of one foot is rubbed with the sole of the other for 10 sec. alternately.

3. Duration—Prolong the bath until the toes are reddened.

4. Effect: Derivative and reflex. Hydrotherapy, p. 755.

HOT FOOT BATH (H Ft B):

1. Temperature—Begin with temperature of 102-105 deg.

2. Rapidly raise to 115-118 deg.

3. Duration—5 min. to 1 hr.

4. Finish with a dash of cold water.

5. Effect—Derivative and revulsive. Hydrotherapy, p. 756.

ALTERNATE HOT AND COLD FOOT BATH (H & C Ft B):

1. Two foot bath tubs are required.

2. Temperature—Hot tub 102 deg. Raise within 2 min. to 112-115 deg. Cold tub, 45 to 65 deg.

3. Immerse feet in hot tub 20 sec., then change to cold tub for 10 sec.

4. Repeat ten times.

5. Effects—Revulsive, derivative.

6. Indication—Cold feet, chilblains.

Leg Baths (Leg b)

"Hydrotherapy," p. 758

REQUISITES:

1. Tub deep enough to immerse patient's legs to knees.

2. Two towels, one to place under the knees, over the rim of the tub, the other over the knees.

3. A blanket to cover the patient.

4. Large Turkish towel for drying.

WARM LEG BATH (Warm Leg B)

1. Temperature—100 deg.

2. Duration—5-10 min.

3. Finish with dash of water at 60 deg.

4. Dry thoroughly, rubbing the knees, soles and calves very thoroughly.

5. Effect—Sedative.

HOT LEG BATH (Hot Leg B):

1. Temperature—Begin at 102-106 deg.

2. Rapidly raise to 115 deg, or as hot as the patient can bear.

3. Duration—3-5 min.

4. Finish same as warm leg bath.

5. Effect—Derivative and revulsive.

ALTERNATE HOT AND COLD LEG BATH (H & C Leg B):

1. Two leg bath tubs.

2. Temperature—Hot tub, 102 deg. Raise rapidly to 110-112 deg. Cold tub, 50-70 deg.

3. Immerse legs in hot tub 15 sec. then change to cold tub 10 sec.

4. Alternate 3 times.

5. Finish with dash of cold water after removal from hot bath.

Miscellaneous Compresses

"Hydrotherapy," pp. 771-791

A compress is a local application consisting of several thicknesses of cloth. Compresses may be dry or wet, and hot, cold, or neutral temperature.

GENERAL DIRECTIONS:

1. A compress should usually cover an area very much larger than the part to be influenced.
2. When ice is to be used for a compress, it should be pounded fine, and placed in a thin rubber bag covered with cheesecloth, or the ice may be folded in a cheesecloth or flannel and the clothing protected by towels or mackintosh. Snow can be used in the same way.
3. A very cold compress must be interrupted every twenty or thirty minutes for about five min. to allow restoration of the circulation and nerve sensibility.
4. Reaction is hastened by rubbing or by a fomentation, hot bag, radiant heat, etc.

VERY COLD COMPRESS (V C C). "Hydrotherapy," p. 777.

1. Pounded ice or snow applied as above described, or water below 55 deg. A rubber bag filled with cold water and covered with a dry or a moist cloth may be used.

2. Wring only sufficient to prevent dripping.
3. Change every three or four min.
4. Effects—"Hydrotherapy," p. 774.

COOLING COMPRESS: (Clg Cc.) "Hydrotherapy," p. 780.

MISCELLANEOUS COMPRESSES

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1. Temperature—55-70 deg.
2. Change every 5-10 min. at first, less frequently later.
3. Effects—"Hydrotherapy," p. 781.

HEATING COMPRESS (Htg Cc.) "Hydrotherapy," p. 824.

A heating compress is a cold compress covered with flannel, or flannel and mackintosh, and retained until it is well warmed or for several hours.

1. Temperature—45-60 deg.
2. Cover the compress with flannel, or flannel and mackintosh, and be sure reaction follows each application.
3. Change every 30-40 min. for several hours, or every 2-4 hours, or retain overnight, as conditions may require.
4. Effects—"Hydrotherapy," p. 825.

SIMULTANEOUS HOT AND COLD COMPRESSES (H C Cc). "Hydrotherapy," pp. 750-840-847.

1. Fomentation to some area with a simultaneous cold compress or ice bag to some other area reflexly related or having an anatomical circulatory relation.
2. Apply from 10-30 min.
3. Effects—"Hydrotherapy," p. 750.

ALTERNATE HOT AND COLD COMPRESS (Alt H C Cc). "Hydrotherapy," p. 816.

1. Alternate application of the fomentation and the cold compress.
2. Apply fomentation 60 sec., and cold compress 20 seconds.
3. Repeat three to ten times. Short hot and short cold.

4. Effect: "Hydrotherapy," p. 816.

REVULSIVE COMPRESS (Rev Cc.) "Hydrotherapy," p. 818.

1. Hot compress 2-3 min. Follow by cold compress 15-20 sec.
2. Repeat 3-10 times.
3. Effect: "Hydrotherapy," pp. 816-819.

PROXIMAL COMPRESS (Prox Cc). "Hydrotherapy," p. 790.

1. An application of cold over the trunk of an artery for the purpose of contracting its distal branches.
2. Apply by means of cooling coil, ice bag, or cooling compress frequently renewed, to the elbow, knee, thigh, or neck, etc.

ALTERNATE HOT AND COLD TO SPINE (H & C Sp). "Hydrotherapy," p. 821.

1. Apply to the spine a fomentation 6-10 inches wide, according to the size of the patient, allowing it to remain 2-3 min.
2. Protecting the bed with a towel, remove fomentation cloth and, beginning at the lower end of the spine, rub ice quickly up and down each side twice, going well up the back of the neck. Then, transversely, passing down and up the spine once.
3. Dry the surface quickly with a towel and renew the fomentation.
4. Alternate three times, finishing with the cold application.
5. The thermophore or electric heating pad may be used. See directions page 20.

6. Effect—Stimulates circulation through spinal cord and nerves.

MENTHOL COMPRESS:

1. One part of menthol liniment, 4 parts cold water, shake well.
2. Wring out and apply as heating compress.

CLAY POULTICE:

1. Warm and apply to the skin. Old muslin and absorbent cotton over this. Retain twelve or twenty-four hours.

Fomentations

"Hydrotherapy," pp. 796-798.

Definition: A fomentation is a hot compress.

GENERAL DIRECTIONS:

1. Warm feet and legs by hot bath, hot bag or radiant heat.
2. Moisten scalp and apply cold compress to head. If the heart is weak or patient breathes short or feels faint, apply cold compress over chest and heart.
3. The fomentation should usually cover an area two or three times that of the affected part and should be thick enough to retain the heat.
4. If the treatment is to relieve pain, make fomentation as hot as can be borne, without burning, and change as soon as it becomes comfortable (every three to five min. unless reinforced by a hot bag).
5. Protect patient from exposure during the change.
6. In applying fomentations, be very careful not to burn the patient. This applies especially to paralytics, diabetics, feeble, insane, elderly people, dropsy, fever, and unconsciousness.
7. In any case, if the patient complains of burning, you may relieve this by slipping the hands under the cloth and rubbing the surface at short intervals, or the fomentation may be removed for a few sec. The fomentations should lie in close contact with the skin.

FOMENTATIONS

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8. Sensitive surfaces, particularly bony prominences like those of the clavicle, hip bones, etc., should have extra protection.

9. In fomentations to the face, a linen towel should be placed next to the skin.

10. In applying a fomentation to a joint, fold the moist cloth inside a dry flannel and apply the central part of the fomentation to the joint, folding the ends over together on one side.

11. Finish with cold (usually). Wring a towel from cold water quite dry and apply to the whole reddened surface for 15-20 sec. The cold towel should be applied the very instant the fomentation is removed to prevent chill by evaporation, or the surface may be cooled by a wet hand rub, or quick ice rub. Dry carefully.

12. If general perspiration has been induced, a general wet hand rub, cold friction, or cold towel rub, should be applied to prevent taking cold.

13. Prevent the bedding being dampened by protecting with mackintosh, towel, newspaper, or blanket.

14. Cover the pail of hot water between applications to preserve heat.

15. The hotter the fomentation (short of burning) the greater the effect as a means of relieving pain.

16. Spread a mat, newspaper or folded towel under the pail to protect the floor or furniture. Be careful in wringing the fomentation cloths to avoid wetting the carpet, furniture or bedding.

17. Fomentations can be prepared in the usual way, then by rolling them firmly and packing them carefully in

a bucket so as not to become chilled, they can be taken quite a distance and used with excellent results.

REQUISITES:

1. A pail of boiling water.
 2. Two or three pieces of heavy, soft blanket flannel.
- A single half-woolen blanket cut in four parts makes the best fomentation cloth.
3. A bowl of cold water or a piece of ice.
 4. A linen or cheesecloth towel and a Turkish towel.
 5. A blanket, newspaper, or oil cloth to cover the pail.
 6. An extra blanket or mackintosh to protect the bed.
 7. A newspaper or mat to place under the pail.

EFFECTS:

1. Primary: excitant; dilates surface vessels; and dilates deeper blood vessels; relieves internal congestion by producing local hyperaemia with collateral anemia, thus relieving pain in the related parts.
2. Secondary: Sedative, lowers vessel tone, causing venous stasis when long continued.
3. Lessens the sensibility of the cutaneous nerves and relieves pain in reflexly related parts through the temperature nerves.

PLAIN FOMENTATION: (Fo):

1. Half or three-quarters of a single blanket furnishes sufficient material for fomentation cloths.
2. Apply one or two thicknesses of dry flannel next to the skin and over this apply the second fomentation cloth (which has been wrung quite dry from hot water and folded to suit the part) and cover the whole surface by folding the dry cloth over.

3. Observe all suggestions. Renew the fomentation every 3-5 min., and continue the applications from 6 min. to half an hour.

MUSTARD FOMENTATION (Mustard Fo):

1. One tsp. of mustard to one cup of hot water.
2. Wring out of this a single thickness of muslin and apply under ordinary fomentation or hot bag.
3. Duration 15 min. (remove sooner if the desired effect is produced).
4. Effect: Strongly revulsive or derivative. Useful to relieve severe pain or congestion.

Thermophore or Electric Heating Pad

Electric heating pads are used with the ordinary fomentations, to prevent cooling. While they can be applied to almost any part of the body, they are particularly useful for application to the spine and back.

GENERAL DIRECTIONS:

1. Do not fold the pad unless made to be folded.
2. Allow a few minutes to warm up before application.
3. The pad will warm up quicker if covered, but must not be forgotten and allowed to become overheated at any time.
4. When not in use, disconnect the plug from the pad.
5. Never pull on the cord to disconnect, but take hold of the connecting plug.
6. Be sure that the mackintosh covering is in good condition as moisture will cause serious damage to the pad.
7. The heat may be moderated as desired by one or more thicknesses of fomentation cloth placed over a damp cloth.
8. Whatever is placed next the skin must be changed for each patient.
9. When applied to the back or the spine, it is best to place the pad on the cot or bed with the upper end over the lower edge of the pillow and folded towel beneath it at the small of the back. Thus prepared, the

THERMOPHORE

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pad will fit the back and neck nicely when the patient lies on it.

10. When used for the application of the revulsive compress to spine, page 29, the patient turns on the side for each cold application, then returns to dorsal position.

11. Do not handle the pad or any other electrical appliance with moist hands.

12. Report needed repairs immediately.

ALTERNATE HOT AND COLD COMPRESS TO HEAD (Alt H & C Co. Hd):

REQUISITES:

1. Three linen compresses.
2. An ice bag $\frac{1}{2}$ full of chopped ice.
3. Spine bag one-third full of water (hot) covered with a fomentation cloth, one end of which has been moistened and applied so that two folds of dry cloth cover the moist.
4. One pailful of ice water and one pailful of boiling water.
5. Frequently changed ice compresses may be used in place of the ice bag, and a fomentation in place of the hot bag and hot compress.

METHOD:

1. Cover the spine bag with a fomentation cloth. Place across the back of the neck close to the head 5 min.
2. Apply at the same time a linen or cheesecloth compress wrung from ice water to upper half of face covering forehead, eyes and ears. Renew every $\frac{1}{2}$ min. for 5 min.
3. Apply cold compresses to side and front of neck.
4. Remove the hot bag from the back of the neck and apply the ice bag covered with cheesecloth five min.

5. Apply at the same time a fomentation over upper half of the face, covering forehead, eyes and ears, for 5 min.

6. Finish by cold compress to the face $\frac{1}{2}$ min.

7. Dry carefully.

8. Repeat the whole procedure if necessary.

9. Indication: Headache due to neurasthenia, passive congestion, anemia or autointoxication. (Cold feet and hands, face pale) "Hydrotherapy," p. 943.

HOT AND COLD COMPRESSES TO HEAD (H C Cc Hd):

1. A simultaneous application of heat and cold to the head.

2. Ice bag or frequently changed ice compress to base of brain, to contract the vertebral arteries.

3. Ice bags or frequently changed ice compress over front and sides of neck to contract common carotids.

4. Ice bag or frequently changed ice compress to vertex to contract the middle meningeal arteries.

5. A Turkish towel over entire head to hold ice bags in place.

6. Fomentation to face, extending over ears, forehead, eyes, cheeks, and nose, to dilate branches of the external carotids. Renew the fomentation every 3 min. Cover the face with two thicknesses of dry cheesecloth to protect from the fomentation cloth.

7. Duration 10-30 min.

8. Cool the face by a short cold compress.

9. Effect: Relieves a congestive headache (Flushed face.) (Throbbing blood vessels.) Is wonderfully beneficial if well applied.

Sponge Baths

("Hydrotherapy," pp. 634-641)

Sponge Bath (Spg b)

Definition: An application of water to the surface by means of a wet sea sponge or soft linen cloth.

GENERAL DIRECTIONS:

1. The patient should be warm before the application is made.

2. The whole body should be kept well covered except the part being sponged.

VERY HOT SPONGE BATH "Hydrotherapy," p. 638.

1. Temperature—130-140 deg.

2. Quantity—half a pailful, to retain heat.

3. Apply as hot as patient can bear in very short, quick touches. Increase pressure and time of contact after a minute.

4. Avoid rubbing.

5. Duration—3-10 min., or until relief is obtained.

6. Finish with application of lanolin cream. Avoid much friction. Keep warm. Chilling of surface will destroy effect of bath.

7. Indication—Paresthesias, chilblains, itch, eczema, urticaria, pruritis, dermatitis, jaundice, sunburn, mosquito and flea bites, also neuritis, neuralgia, abnormal sweating.

ALCOHOL SPONGE (Alc Spg). Use not necessary, should be discarded. The vinegar or saline sponge is better.

SPONGE BATH

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1. To three parts of water at the desired temperature add one part of proof spirit. 1 cupful required.

2. Apply with a sponge or a piece of soft linen to chest, abdomen, arms, legs, and back.

3. The parts may be either dried with as little friction as possible or left to dry by evaporation under a light covering.

ALKALINE SPONGE (Alk Spg). "Hydrotherapy," p. 638.

1. 1 tbsp. of bicarbonate of soda to 1 pt. of water at 130-140 deg. Keep hot by placing small basin in a pail or washbowl of very hot water.

2. Proceed as for hot sponge.

3. Indication—Eczema and other skin affections accompanied by itching.

SALINE SPONGE (Sal Spg):

1. A handful of salt in one quart of water 60-90 deg.

2. Proceed as in simple sponge bath.

3. Effect: Tonic.

VINEGAR SPONGE:

1. One part of good vinegar to three parts of water.

2. Proceed as in simple sponging.

3. Indication—Excessive perspiration.

SPONGING SPINE (H Spg Sp):

1. Use a large soft cloth or a large round sea sponge.

2. Dip sponge into water as hot as can be borne, and press against the side of the pail to remove enough water so it will not drip, or squeeze with hand protected by mackintosh or oiled cloth.

3. Beginning at the occiput, proceed downward with a rapid even stroke, light at first, increasing the pressure gradually to the end of the stroke. Down on one side of the spine and up on the other.

4. Dip the sponge again and repeat, starting on the opposite side of the spine.

5. Time—10-20 min. usually 10 min.

6. Cool the surface treated and dry as after fomentation.

7. Indications—Nervousness; insomnia. "Hydrotherapy," p. 638.

ALTERNATE SPONGING TO SPINE (Alt Spg Sp):

1. Apply hot sponge for 1-2 min.

2. Apply a second sponge dipped in ice water or rub with ice for 5-10 sec.

3. Time—5-10 min.

4. Finish as for fomentation.

5. Indication—Exhaustion; neurasthenia. "Hydrotherapy," p. 639.

Packs (P)

("Hydrotherapy," pp. 600-626)

GENERAL AND LOCAL PACKS:

1. General Pack (enfolding the entire body)
2. Half Pack (from axilla to middle of thigh)
3. Trunk Pack (from axilla to crest of ilium)
4. Hip Pack (from umbilicus to middle of thigh)
5. Leg Pack (to whole legs)
6. Hip and Leg Pack (to hip and legs)
7. Pelvic Pack (see description)
8. Abdominal Pack or Girdle
9. Chest Pack
10. Throat Pack
11. Spinal Pack
12. Packs to any joint or other locality of the body.
13. The fomentation and various compresses are simply small local packs. Any of the above packs, except those to small areas, can be of the following types:

Special Forms of Pack

1. Cold and cooling sheet packs.
2. Neutral sheet packs.
3. Heating sheet packs.
4. Superheating sheet packs.
5. Evaporation sheet packs.
6. Shower packs.
7. Hot blanket packs.
8. Dry blanket packs.
9. Hot and cold packs.

10. Hot and heating packs.
11. Cold and heating packs.
12. Alternate hot and cold packs.

GENERAL DIRECTIONS FOR COLD, WET SHEET PACKS:

1. The general skin surface should be warm before the application.
 2. Make and keep the feet warm.
 3. If large or general, apply cold compress to head, or to head and neck, before applying the wet sheet.
 4. Wring the sheet dry, apply quickly, and smoothly so as to fit the skin everywhere.
 5. In any pack including the limbs, see that each limb is completely and snugly wrapped in the sheet.
 6. Cover snugly and smoothly with flannel blanket.
 7. Exclude all air spaces, or the effect of the pack may be the opposite of that desired.
 8. The flannel or blanket over the cold application must cover the wet sheet completely and extend one or two inches beyond its edges, leaving no wet edges exposed.
 9. A local pack may remain until the compress is nearly dry, when it should be removed or renewed. Never allow compress to remain after it becomes dry.
 10. Use mackintosh between wet sheet and flannel in local packs when continuous heating effects are desired, and whenever necessary to secure quick and thorough warming.
 11. On removing the pack, apply cold water at once with friction to secure prompt tonic reaction.
- The Wet Sheet Pack may be given as:

1. Cooling sheet pack (Clg S P): Tonic (70-75, wring dry).
2. Neutral sheet pack (N S P): Sedative—apply at the same temperature as ordinary pack.
3. Heating sheet pack (Htg S P): Derivative—exciting.
4. Superheating sheet pack (Super Htg S P): Eliminative.

The wet sheet pack is usually applied at a temperature of 60-70 deg., minutely described in "Hydrotherapy," pp. 600-616. The different effects which characterize the cooling, neutral and heating wet sheet pack are secured by the following modification:

1. Adjustment of the flannel coverings.
2. Increasing or lessening amount of water left in the sheet.

EVAPORATING SHEET PACK (Evap S P): "Hydrotherapy," p. 625.

COLD SHOWER PACK (C Shower P): "Hydrotherapy," p. 616.

HOT BLANKET PACK (H B P): "Hydrotherapy," p. 623.

REQUISITES:

1. Four or five woolen blankets.
2. Five or six hot water bottles or bags.
3. A bowl of very cold water and a towel or cheese-cloth compress for head.
4. A couple of dry towels.
5. A pailful of boiling water.
6. A drinking glass and gruel tube.

GENERAL DIRECTIONS:

1. Thoroughly empty the colon by enema half an hour before the pack, and have patient drink a glassful of hot water.

2. If the feet are cold, give a hot foot bath.

3. Be careful to empty the bladder just before the pack.

4. Fill five water bags one-third full of water at 160 deg.

5. Be careful not to burn the patient while in the pack. If the slightest complaint is made as to bag feeling too hot, cover it more thoroughly at once.

6. In paralytics, diabetics, elderly people, children, insane, in cases of collapse and dropsy, and after anesthetics, always allow an extra thickness of blanket between patient and hot bags.

TECHNIC:

1. Spread a blanket over the bed.

2. Place on the blanket three spine bags filled with hot water, one for the spine, one for each side. The middle bag should be only one-third full.

3. Spread two more blankets.

4. Finish the foot bath, put cold compress about the patient's neck.

5. Prepare the moist blanket, folding lengthwise each edge toward the center, twist very loosely and immerse in boiling water, wring dry as possible in the manner in Fig. 87, p. 619, "Hydrotherapy," p. 600; Fig. 74-81.

6. Cover with a single dry, heavy woolen blanket.

7. Have patient drink a glassful of hot water and lie down in dorsal position.

8. Wrap snugly in dry blanket.

9. Apply hot water bag to stomach and to feet, with two thicknesses of blanket between bag and skin. Complete the wrappings.

10. Tuck the blanket tight about feet and neck.

11. Place soft napkin or towel under patient's chin and a cold compress about the neck and on the head.

12. Renew cold compresses often enough to keep cool during the pack.

13. If the patient does not begin to perspire in 10-15 min. give another glass of hot water and rub limbs outside of blanket. If necessary give a very hot foot bath, allowing the covers to fall around the top of tub so as to exclude the air.

14. Time—20 min.

15. Finish with cold mitten friction or cold towel rub without percussion.

16. If given only as a preparation for cold or tonic bath, the pack should be short 3-8 min., sufficiently only to heat the skin.

17. In all cases the cold application should follow instantly upon the removal of the blanket. In persons who do not react well the hot blanket should be removed gradually, each part being rubbed with cold water and dried as soon as uncovered.

18. Effect: "Hydrotherapy," p. 623.

DRY BLANKET PACK (D B Pk):

1. Nearly the same as hot blanket pack, except that all the blankets are dry. "Hydrotherapy," p. 619.

2. Give two glassfuls of hot water before pack and one every ten min. during pack.

3. Do not apply cold compresses to head and throat until the patient is well warmed up.

4. Time—until patient perspires freely. Usually 30 min. to 1 hour.

HOT TRUNK PACK (H Tr Pk):

1. Lay across the couch a blanket folded crosswise and wide enough to extend from axilla to pubes.

2. Lay over this a blanket folded four inches narrower and wrung from boiling water.

3. Place a dry fomentation cloth on the steaming blanket. Place patient in position drawing over and tucking in first one side and then the other.

4. Snugly apply first the dry flannel then the wet blanket and lastly the dry blanket.

5. Place a spine bag on each side of the patient and a hot water bag on the abdomen with two thicknesses of dry blanket between them and the moist blanket.

6. Keep head cool by cold compress to the head and neck.

7. Indications—Suppression of urine, abdominal pain or inflammation from any cause, gastritis, gastralgia, biliary, renal and intestinal colic, also appendicitis.

HOT AND COLD TRUNK PACK:

1. Hot trunk pack as above.

2. Before closing blankets apply ice bag protected by one thickness of muslin or two of cheesecloth at pit of stomach.

3. Indication—Acute inflammation of the stomach, duodenum and liver.

ALTERNATE HOT AND COLD TRUNK PACK (Alt H C Tr P):

1. Hot trunk pack as described above followed by a cold trunk pack 60 deg. applied as a heating compress.

2. Indication—Chronic passive congestion of abdominal viscera.

HEATING TRUNK PACK (Htg Tr P):

1. Apply the same as the hot trunk pack, using a wet sheet wrung from water at 60 deg. in place of the hot blanket. No hot water bottles are used. Apply mackintosh as in wet girdle.

2. Effect—Tonic when lightly covered. Induces blood movement, stimulates the flow of gastric juice, encourages digestion, renal and intestinal activity. Sedative and derivative when covered with mackintosh and continued for an hour or more. Dilates the surface and internal blood vessels, relieves gastric irritability, either sensory or motor.

3. Indication—Pain, nausea, vomiting, eructations, water brash and hyperacidity occurring within an hour or two after eating, dropsical effusions and cirrhosis of liver, chronic gall bladder disease, constipation, chronic appendicitis. "Hydrotherapy," p. 824.

COLD AND HEATING TRUNK PACK (Htg. Tr P):

1. Heating trunk pack with an ice bag or cold water coil over the stomach.

2. Effect: The heating pack is derivative while the ice bag produces reflex contraction of the vessels, thus relieving congestion. The effect of the application is

greatly increased by a hot foot bath or a hot application to the feet, abdomen, and legs.

3. Indication—Pain or vomiting due to intense congestion of the stomach.

4. Avoid using when the pain is spasmodic in character. Often renders great service in cases in which the hot and heating pack does not afford relief.

HOT AND HEATING TRUNK PACK (Htg Tr P):

1. Heating Trunk Pack with stomach bag one-half full of hot water, or a hot water coil over the stomach with one or two thicknesses of flannel between it and the wet pack.

2. Apply 30 min. before and continue during and an hour after eating.

3. Indication—Vomiting after meals, vomiting due to pregnancy, pyloric spasm, gas formation, heaviness. "Hydrotherapy," pp. 847-853.

HEATING PELVIC PACK (Htg Pelvic P):

1. Fold a blanket crosswise in three and place it across the middle of the cot.

2. Fold in one end of a blanket to make a square, then fold again to make a triangle along and an inch or two below the upper border of the folded blanket.

3. Spread smoothly over this an inch or two lower a triangle similarly made with a sheet wrung out of water at 60 deg. The upper border of the wet sheet must be on a level with the umbilicus when the patient lies on it.

4. While the patient flexes and separates the knees, the triangle is brought up between the legs and spread over the abdomen, pressing the blanket close against the

perineum, then with the legs extending, each lateral angle is wound around the corresponding thigh.

5. The blanket triangle is next applied in the same way except that each lateral angle is wrapped about the thigh of the opposite side.

6. Effects: "Hydrotherapy," pp. 874-877.

HOT PELVIC PACK (H Pelvic P):

1. Same as above, using hot blanket instead of wet sheet.

2. Place a hot water bag at the feet and one at the sacrum or one at each hip.

3. Indication—"Hydrotherapy," p. 879.

HOT AND COLD PELVIC PACK (H C Pelvic P):

1. Hot pelvic pack with ice bag or cold coil, protected by one thickness of cheesecloth or muslin over hypogastrium.

2. Indication—Acute inflammation of the uterus, ovaries, fallopian tubes, or other pelvic viscera.

MOIST ABDOMINAL BANDAGE (M A B OR WET GIRDLE W G.) "Hydrotherapy," p. 829.

REQUISITES:

1. A heavy woolen bandage twice the waist measure in length and wide enough to reach from the pubes to the end of the sternum.

2. A piece of mackintosh 6 inches shorter and one inch narrower.

3. A linen bandage one inch narrower than the mackintosh and the same length.

4. Safety pins.

5. Pail or large basin of water at 60 deg.

TECHNIC:

1. Patient in sleeping gown, sits up in bed if able.
2. Place across the cot in the following order, the flannel bandage with lower edges touching the hips, the mackintosh over this.
3. Wring dry the linen bandage from cold water and spread smoothly upon the mackintosh.
4. Patient now lies back on the bandage and each layer is brought around the body successively, first one side and then the other, covering the body from sternum to pubes.
5. If patient is unable to sit up, prepare the bandages, fold crosswise and slip under the patient in proper position.
6. Pin snugly with safety pins beginning at the lower edge and taking a dart on each side if necessary to make it fit closely at every point.
7. If the surface is cold or the patient dreads the contact of the cold, wet bandage, warm by rubbing or a hot application.
8. The bandage should become warm within ten min. at the longest and should remain warm until removed. If the bandage does not warm up quickly, one of the following measures will be required:
 - a. Wring wet bandage drier.
 - b. Employ colder water, wringing the bandage very dry.
 - c. Use thinner bandages.
 - d. Cold mitten friction to the surface to which the bandage is applied, followed by rubbing until warm.
 - e. Fomentation or radiant heat.

- f. Dry hand rub until the skin is red.
 - g. Percussion before or after applying the bandage.
 - h. Hot bags or radiant heat over the bandage for a few min. while bandage is warming up, being careful to remove it before the patient is overheated.
 - i. Wet only the part of the bandage covering the abdomen.
 - j. If strong enough the patient should exercise for a few min. until the bandage is well warmed.
- HEATING CHEST PACK (Htg C. P). "Hydrotherapy," pp. 857-860.
1. Roller Heating Chest Pack. "Hydrotherapy," p. 857.
 2. Square Heating Chest Pack. "Hydrotherapy," p. 858.
 3. Triangular Heating Chest Pack. "Hydrotherapy," p. 859.
 4. Towel Heating Chest Pack. "Hydrotherapy," p. 860.
 5. Drawers Heating Chest Pack. Emergency method.
 - a. Wring two linen towels from cold water, 60 deg., or colder, and apply one over each shoulder, crossing the ends in front and behind.
 - b. Cover the wet towels with a pair of woollen drawers held upside down, the seat at the neck in front, legs over the shoulders, crossing at the back, then brought around under the arms and pinned in front.
 - c. If more coverings are needed, apply a second pair of drawers with the seat at the back, crossing the legs in front.

HEATING SPINAL PACK (Htg Sp P). "Hydrotherapy," p. 839.

HEATING THROAT PACK (Htg Thr P). "Hydrotherapy," p. 865.

HEATING NECK PACK (Htg Neck P). "Hydrotherapy," p. 866.

HEATING LEG PACK (Htg Leg P). "Hydrotherapy," p. 879.

HEATING FOOT PACK (Htg Ft P). "Hydrotherapy," p. 880.

Electric Heating Blankets

These blankets are exceeding useful for the application of various hot packs, especially the full pack and the hip and leg pack.

GENERAL DIRECTIONS:

1. Turn on the current (switch first, rheostat next) of the electric blanket so it will be warm when applied.

2. The various coverings are arranged on the bed according to the kind of pack to be given and in the following order:

- a. Double blanket.
- b. Electric blanket.
- c. Single blanket.
- d. Dry sheet.
- e. Turkish towel rolled or folded to form a pad and placed at the heels.
- f. A folded Turkish towel placed over the toes.
- g. Towels wrung out of hot water and applied as follows:

For the Full Pack:

Spread a towel lengthwise under the back, another lengthwise under the legs. After patient lies down, spread a towel over the trunk, and another over the legs.

Hot Hip and Leg Pack:

Spread a large towel lengthwise under the hips and legs, and another towel lengthwise over the legs.

3. Place folded towels under heels and over toes.

4. Bring over first the sheet, then the single blanket, first one side then the other.

5. Apply the blanket in the same manner and very snugly, tucking in the ends carefully.

6. In most cases, especially in elderly people a folded sheet or a sand bag placed under the knees will relieve tension and contribute to the patient's comfort.

7. If the pack becomes too hot, lessen the amount of current by adjusting the rheostat or turn the current wholly off. If too hot at certain points, move patient so as to lessen pressure at the point complained of. If the excessive heat persists, open the pack at once and ascertain the cause.

8. Be careful to adjust the switch and rheostat properly.

9. Fold the electric blanket carefully and no more than necessary and be sure that the current is turned off completely when treatment is finished.

10. Report immediately any repairs needed.

Electric Light Bath (E l b)

("Hydrotherapy," pp. 707-711)

GENERAL DIRECTIONS:

1. Precede the treatment by an enema if necessary, especially if the bath is to be eliminative.
2. Have patient drink one or two glasses of water.
3. Give a hot foot bath if the feet are cold.
4. Turn on the lights to warm the cabinet before the patient enters, unless it has just been used, and is warm.
5. Apply cold compress to the face and neck, changing frequently. Ice bag to heart.
6. Spread wet towel over cabinet, before patient's face.
7. Time—3-5 min., tonic, 10-20 min., eliminative.
8. The patient must be watched closely, and continuously, especially if the bath is prolonged.
9. Fainting is sometimes caused by sudden change of position or by over heating. To prevent, keep head cool and change cold compress, bathing the face just before taking the patient out of the bath.

Radiant Heat Application (R h applications)

("Hydrotherapy," pp. 707-711)

The Electric Light Bath is a Radiant Heat Application. Radiant Heat Applications may be either general, as in the E. L. B., or local as in the Electric Light Half Bath. The electric thermophore is used for smaller radiant heat applications. The arc light may be used also.

GENERAL DIRECTIONS:

1. See page 31, paragraphs 1, 2, 3, 4, 5, 6, 11, 12, and 13, under Fomentations.
2. Make the application directly to the skin unless otherwise ordered.
3. If the effect of a fomentation is desired, apply a damp cloth over the surface treated.
4. Radiant heat to the trunk and hips, or hips and legs, is applied with the local or half E. L. B.
5. A special photophore is provided for applications to the joints of the legs and arms. Use the ordinary photophore for other local applications.
6. An application of the photophore should always be followed by a short cold application or a heating compress.
7. Be careful not to burn bedding or injure it. Never place the photophore face down without turning the current off.
8. Indication—Pain, either superficial or deep, neuralgia, rheumatism, neuritis, bruises, wounds, surgical as well as traumatic.

Russian Bath (Russian)

GENERAL DIRECTIONS:

1. Precede by an enema, hot foot bath, and water drinking (2 glassfuls).
2. Bring Russian room to temperature of 100 deg.
3. Heat the slab and cover it with a sheet.
4. Assist the patient to position on the slab.
5. Cold compress to head, face and neck, changing frequently.
6. Ice bag or cold compress over the heart.
7. Gradually raise the temperature of the bath to 115 or 120 deg.
8. Patient should drink a glassful of water every 10 min.
9. Time—5-20 min.
10. Watch patient very closely.
11. Finish with Turkish or Swedish shampoo.
12. Indication—Increased elimination. "Hydrotherapy," p. 698. (Note carefully the contraindication, E. L. B., is much superior.)

The Turkish Bath (Turkish)

("Hydrotherapy," p. 694)

GENERAL DIRECTIONS:

1. Prepare patient as for Russian bath.
2. Heat room to temperature of 120 deg.
3. Spread large sheet over the couch.
4. Assist patient to lie down.
5. Gradually increase temperature of room from 120-170 deg.
6. If patient does not perspire readily give rapid circular friction to extremities, chest and abdomen for 2 or 3 min.
7. Time—20-60 min.
8. Finish with Turkish shampoo, spray and rub.

Turkish Shampoo (Turkish sh)

("Hydrotherapy," p. 695)

REQUISITES:

1. Two pails of water at 90 and one at 100 deg.
2. A mass of curled hair, or a loofah, or a shampoo brush.
3. A pair of friction mitts.
4. Four sheets.
5. Warm room and slab.
6. A rubber pillow and rubber cap to protect the hair (for women).

PROCEDURES—FIVE STEPS:

1. Removing the perspiration.
2. Manipulations to loosen epidermis and percussion.

3. Mitten friction.
4. Shampoo.
5. Spray.

1ST STEP—Removing Perspiration:

1. Patient lying on slab, face upward, with head to attendant's left.
2. Using water at 90 deg., wet face, dash water over the patient, using long rapid strokes over the chest and abdomen, arms and legs, dipping many times.

2ND STEP—Manipulations to Loosen Epidermis:

Face and Neck:

1. Dip the hands in water and rub the face with short, alternate movements.
2. Placing the under side of the hands under the jaws, give alternate to and fro friction.
3. Place one hand on the forehead and give friction to chin.
4. Friction to neck.
5. Wash off the loosened epidermis.

Chest:

1. Reinforced rubbing (place one hand with palm on the patient, the other hand pressing upon it) rub first on one side, over the upper part of the chest, then supporting the loose tissue with one hand, apply heavy transverse friction over and beneath the breast. Continue with reinforced transverse movements to the side and abdomen, well down over the hip following the directions of the muscles as much as possible and making the movements overlap each other so that each area is covered several times.

2. Same on the other side of the trunk.

3. Dip the hands in water and rinse the surface frequently while rubbing.

4. Rinse the whole trunk following with long reinforced strokes from neck to pubes, first in the median line, then to each side. If you fail to secure the indication that the loosened epidermis is removed, give more reinforced rubbing. Rinse well.

5. Percussion over the chest, abdomen and sides covering the entire surface, two or three times.

Right Arm:

1. Have the patient place the right hand against the attendant's thigh or shoulder, keeping the arm extended and rigid.

2. Give heavy circular friction from shoulder to wrist, with both hands simultaneously, thoroughly covering the whole surface.

3. Wash off the loosened epidermis following with long reinforced strokes from shoulder to wrist.

4. Repeat if necessary.

Hand:

1. Grasping the patient's hand with both thumbs on dorsum, give heavy rubbing movement, the thumbs working upward, and the forefingers downward. Each finger should then be given strong to and fro friction with thumbs and forefingers. Wash off loosened epidermis.

2. Percussion of arm and hand.

Leg:

1. Standing with back toward head of patient, give reinforced rubbing commencing at the inner thigh well up in the groin, down to feet, then to outer surface, beginning well up to the hips.

2. Wash off loosened epidermis following with long reinforced strokes.

3. If necessary, repeat the reinforced friction and washing.

Foot:

1. Alternate friction to sides and dorsum of foot, with palm and edge of hand.

2. Wash off loosened epidermis.

3. Percussion to the whole leg and foot.

4. Assist the patient to turn so as to lie face down.

Back:

1. Pass rapidly over the entire back, legs and arms with long, rapid strokes and many dips of water from the basin.

2. Apply reinforced rubbing transversely on each side of the back from spine outward, from shoulders to thighs.

3. Wash off loosened epidermis following with long reinforced strokes from the neck to thighs.

4. Repeat reinforced rubbing if necessary.

5. Percussion to back and hips.

Left Arm:

1. Same as the right.

Back of Leg:

1. Same as anterior surface.

Feet:

1. Firm rubbing to soles and heels, using ulnar edge of hand.

2. Wash off loosened epidermis.

3. Percussion to legs and feet.

3RD STEP—Mitten Friction:

1. Use the second pail of water at 90 deg. Give friction with "filled mitt" to whole posterior surface of the body.

2. Turn patient again.

3. Same to whole anterior surface of the body.

4TH STEP:

1. Use the pail of water at 100 deg., and give a Swedish shampoo.

5TH STEP:

1. Prolonged spray at 90 deg., to cool the skin and subcutaneous tissue which has been superheated by the hot bath.

2. Finish with a short cold spray to insure reaction.

3. Dry and fan till skin is firm and cool.

4. Allow the patient to rest on a comfortable couch until the temperature and pulse are normal.

Hydriatic Ladder of Tonic Cold Applications

("Hydrotherapy," p. 1103)

A tonic is an agent which promotes normal vital activity.

Partial Wet Hand Rub (Partial W H R)

("Hydrotherapy," pp. 627-630)

The partial wet hand rub is intended for very delicate patients, especially patients suffering from cardiac disease.

REQUISITES:

1. Sheet and blanket.
2. Three Turkish towels.
3. Large bowl of water at 60 deg.
4. Compress for the face and neck.

GENERAL DIRECTIONS:

1. The patient must be warm at the time of the application.
2. Do not expose any portion of the body any longer than is absolutely necessary during the treatment, and cover with a blanket if necessary.
3. Dip the hands and, with fingers straight, bring them out quickly, then turn the palms up so they will retain a little water.
4. Good reaction should be secured in each area before proceeding to another.

5. Test the skin of each part for thorough dryness with the bare hand before covering it.

6. Temperature 60 deg., unless otherwise prescribed.

7. The treatment can be made more vigorous by increasing the number of times the hands are dipped, the amount of water applied, and by using colder water.

8. Be quick, thorough and gentle.

Face and Neck:

1. Cool the face and neck with a towel wrung from cold water, redipping the cloth three or four times.

Chest and Abdomen:

1. The patient lies on back, covered with sheet and blanket.

2. Uncover the chest and abdomen. Place a Turkish towel on each side of the patient, tucking well under the body, and place another lengthwise over the legs, outside the blanket.

3. Dip the hands in water at 60 deg. and apply rapid to and fro friction to the chest, sides, and abdomen. Follow with spitting.

4. Quickly draw the towel placed on the legs up over the chest and abdomen, rub and pat gently until dry.

5. Cover the chest and abdomen and expose the arms, one at a time.

Arms:

1. Place a towel lengthwise under the arm, drawing one end up over the shoulder.

2. Raise the arm and apply rapid friction with the wet hands, from hand to shoulder. Follow with spitting.

3. Place the arm on the towel and wrap it, and with the arm either down or held up, apply friction over the towel to dry the skin.

Legs:

1. Have patient flex legs.
2. Place a towel over the abdomen and opposite thigh and one under the leg and near foot.
3. Give wet hand rub to foot and thigh. Follow with spitting.
4. Cover and dry.
5. The same to the other leg.

Back and Hips:

Treat the same as chest and abdomen.

Wet Hand Rub (W h r)

GENERAL DIRECTIONS:

1. The patient must be warm at the time of the application.
2. Spread a Turkish sheet over the cot or bed, allowing it to hang over about a foot on the side next to the attendant, covering the patient with the further side only of the Turkish sheet.
3. Keep the patient carefully covered both before and after the cold application.
4. Temperature of water 50-60 deg.
5. The application may be made more vigorous by increasing the number of times the hands are dipped, the amount of water applied, and by using colder water.

METHOD:

1. Cool the face and neck with a towel wrung from cold water.

2. Draw the Turkish sheet aside, exposing the chest, abdomen, and arms, and give rapid to and fro friction with the wet hands, to the chest, sides, abdomen, then to the shoulders and anterior surface of arms, simultaneously. Cover with a Turkish sheet immediately.

3. Uncover the feet and legs. With one hand to each limb, working simultaneously, give rapid friction to anterior surface of legs and tops of feet.

4. Cover with sheet, pat and rub till dry and warm.

5. Hold the Turkish sheet up while the patient turns face downward. Arms down at the sides.

6. Treat the posterior surface the same as the front, ending with sharp percussion to the soles of the feet with the wet hands. Cover the patient.

7. Give rapid friction over the sheet to the posterior surface systematically and with special attention to the sides, inner surface of the legs and to feet. Remove the Turkish sheet and give percussion covering the same area systematically and making sure that the whole area is thoroughly dry.

8. With more vigorous patients, the whole of the anterior or posterior surface of the body can be exposed at once for the application.

9. With delicate patients, each section on being covered can be rapidly dried before proceeding to another.

Partial Cold Mitten Friction (Partial c m f)

The following method is to be followed by feeble patients, especially when suffering from cardiac diseases.

REQUISITES:

1. Sheet and blanket.

2. Three Turkish towels.
3. Pail of water at 60 deg.
4. Compress for face and neck.
5. A pair of friction mitts.

GENERAL DIRECTIONS:

1. The same as given for the partial wet hand rub.
2. The method is identical with that followed in the partial W h r, except that friction mitts are used and no spatting given.

Face and Neck:

1. Cool the face and neck.
2. Apply cold compress to face and neck.

Chest and Abdomen:

1. Prepare as in the partial W h r.
2. Dip mitts and wring lightly with mitts on.
3. Apply to and fro friction to chest, abdomen and sides, rubbing the surface till reddened and warm.
4. Cover with a dry towel and give friction over the towel till the surface is well dried.

Arms:

1. Place towel under arm.
2. Give friction with cold mitts, beginning at hand and proceeding to shoulder with rapid to and fro strokes.
3. Fold the towel around the arm and dry by rubbing over towel.

Legs:

1. Place a towel as in the W h r partial.
2. With knee flexed and beginning at the foot, apply firm friction to sole, and to sides and top of foot, continuing friction upward to leg and thigh.

3. Cover with towel and dry.

Back and Hips:

Treat and dry same as chest and abdomen.

Cold Mitten Friction (C M F)

"Hydrotherapy," pp. 642-647.

GENERAL DIRECTIONS:

1. The patient must be warm at the time of the application and must be carefully covered both before and after the application.
2. Spread a Turkish sheet over the cot, allowing it to hang over about a foot on the side next to the attendant, covering the patient with the further side only of the Turkish sheet.
3. Do not expose the patient any longer than absolutely necessary during the cold application. The mitts can be slipped on and dipped before drawing the Turkish sheet aside to expose the parts to be treated.
4. Temperature of water 50-60 degrees.
5. The treatments may be accurately graduated by increasing the number of times the mitts are dipped, by gradually lowering the temperature of the water from day to day and by the amount of water carried by the mitts, "moist mitts," "wet mitts" and "filled mitts." The mitts are first wet and wrung and slipped on the hands. For moist mitts the palmar surface of the mitt merely touches the surface of the water when dipped. For wet mitts the hands covered by the mitts are quickly dipped in the water two-thirds their length, then shaken to remove excess of water. For filled mitts the whole mitt is immersed and filled with water and quickly carried to the part to be treated.

6. Be quick, thorough and gentle.

METHOD:

1. Cool the face and neck with a towel wrung out of cold water.

2. Wring the mitts and slip them on.

3. Quickly expose the chest, abdomen, and arms.

4. Dip the mitts and give rapid to and fro friction to the chest, abdomen, sides, and shoulders and then the anterior surface of the two arms, simultaneously.

5. Cover with Turkish sheet immediately.

6. Dip the mitts. Expose the feet and legs, and with one hand on each leg working simultaneously, give rapid friction to the anterior surface of legs and top of feet.

7. Hold the Turkish sheet up while the patient turns over. Arms down at the sides.

8. Treat the posterior surface the same as the front, ending with percussion to the soles of the feet with the wet mitts. Remove the mitts and cover the patient.

9. Give rapid friction over the sheet to back, hips, legs and arms systematically, giving special attention to the sides, inner surface of the legs, and feet. Remove the Turkish sheet and give percussion to the posterior surface, and make sure that the whole surface is thoroughly dry.

10. With more vigorous patients, the whole of the anterior or the posterior surface of the body can be exposed for the application.

11. With delicate patients, each part on being covered should be rapidly dried before proceeding to another part.

Cold Towel Rub (C t r)

REQUISITES:

1. Woolen blanket and sheet.
2. Three Turkish towels
3. A pail of water at 50 deg.
4. A compress for the face and neck.
5. Two wide linen towels, one long enough to cover legs.

GENERAL DIRECTIONS:

See Partial Wet Hand Rub.

Head and Neck:

1. Cool face and neck.
2. Cold compress to face and neck.

Chest and Abdomen:

1. Uncover chest and protect with Turkish towel while wringing the linen towel out of cold water.

2. Draw the Turkish towel down over the legs outside the blanket, shake out the wet towel and catching the two corners of one end, hold it up for the patient to catch the opposite corners which he holds over his shoulders, then quickly draw the rest of the towel down over the body.

3. Give percussion and long percussion strokes until the towel is warm.

4. Dry as in the Partial W h r.

Arms:

1. Place a Turkish towel lengthwise under the arm, folding the upper end over the shoulder. On the dry towel spread the freshly wrung wet towel, while the patient's arm is raised and lay the arm on it.

2. Wrap the wet towel around the arm, inside border first, outside border next, the patient grasping one end with the wrapped hand and holding the corner at the shoulder with the other hand.

3. Apply percussion and percussion strokes until towel is warmed.

4. Remove the wet towel, wrap arm in the Turkish towel and dry.

Legs:

1. The front of each leg is treated as the chest and abdomen, the patient holding one end of the towel.

2. The backs of legs and feet are treated simultaneously after the patient turns over, the patient holding the towel at the hips.

Back:

Same as chest and abdomen.

Half Sheet Rub ($\frac{1}{2}$ S r)

GENERAL DIRECTIONS:

1. See Wet Hand Rub.
2. Use a half sheet wrung from water at 50-60 deg.

METHOD:

1. Cool the face and neck.
2. Gather the long edge of the half sheet in the hand, wring it out of cold water and place it, still gathered, over the blanket across the chest. The corners are securely tucked under each shoulder. Now uncover the patient and quickly draw the wet sheet down over the entire body, pressing it down between the legs.

3. Give percussion and percussion strokes to the whole surface, working rapidly up and down until the sheet is warm.

4. Remove the wet sheet by grasping the upper end and gathering it quickly in the two hands and dip it in the pail of cold water.

5. With assistance the patient turns over, arms at sides, and is covered while the sheet is being wrung out.

6. The posterior surface including the back of the arms, which are placed at the sides, and the soles of the feet, are treated as the anterior surface.

7. Cover the patient and give a thorough friction over the dry sheet, following with percussion to the skin.

8. With delicate patients, the anterior surface should be covered and rapidly dried before the patient turns over.

Wet Sheet Rub (W s r)

GENERAL DIRECTIONS: "Hydrotherapy," p. 653.

1. The patient must be warm at the time of the application.
2. Give a hot foot bath when possible. If this is omitted, be careful to warm the patient's feet by hot water bags or thermophore.
3. Temperature 60-70 deg.
4. Make only one application of the wet sheet unless otherwise prescribed.
5. Best given by two attendants in which case one takes care of the trunk and arms, and the other the hips and legs.
6. Proceed with vigor, taking care not to hurt the patient, especially when going over the sensitive parts.
7. Rub over the sheet, not with it.

METHOD:

1. Cool the face and neck well before beginning.

2. Apply a cold compress to the head and neck.
3. The patient stands covered with a sheet and blanket in a hot foot bath, 102-104 deg., while the wet sheet is prepared as follows: Gather one end of the long edge of the sheet in the left hand, double and wring out of water at the desired temperature.
4. Remove the dry sheet, with the right hand, still keeping hold of the gathered edge of the wet sheet with the left. While the patient extends the arms sidewise, apply the left hand corner of the sheet, close up under the right arm, then across the front of the body, and beneath the left arm, then while the arms are lowered, across the back, over the right shoulder and across the front, up over the left shoulder to the back, carrying the corner up to the back of the neck or over to the right shoulder and tucking it snugly under the edge, so as to hold the sheet in place. Also tuck the sheet in between the legs, to be held there by the patient pressing the legs together.
5. Standing on one side of the patient, give rapid, vigorous and light downward percussion strokes, going rapidly over the whole body several times until the whole sheet is warmed.
6. Remove the wet sheet, dash cold water over the feet. Wrap a Turkish sheet about the patient and dry thoroughly, with vigorous rubbing.
7. See "Hydrotherapy," p. 653 for a more minute description.

Dripping Sheet Rub (Dpg S r)

METHOD:

"Hydrotherapy," p. 656.

1. Prepare three pailfuls of water at the following temperatures:
No. 1—70, No. 2—65, No. 3—60 degrees, or as prescribed.
2. Dip the sheet in number 1 and apply it dripping as in the wet sheet rub.
3. Give vigorous percussion strokes and spating for 20-30 sec., or until the sheet warms.
4. Pour number 2 rapidly over first one shoulder and then the other and make percussion again until the sheet begins to warm.
5. Pour number 3 over the patient, percuss as before then remove the wet sheet and wrap quickly in Turkish sheet and dry.

Shallow Bath (Shal b)

GENERAL DIRECTIONS:

"Hydrotherapy," p. 594.

1. Precede the treatment by a hot foot bath or a short E. L. B., or other hot treatment.
The patient must be well warmed before entering the bath.
2. Cool the head and neck very thoroughly.
3. The patient should always assist by rubbing his arms and trunk throughout the bath. The exercise promotes reaction.
4. Quantity—Six inches of water in the tub, or enough to cover the legs.
5. Temperature—70-75 deg., 1-3 min.

TECHNIC:

1. The patient sits in the tub with legs extended and vigorously rubs his arms, chest and abdomen throughout the bath.
2. The attendant rubs the back and sides. . . 20 sec.
3. The attendant dips water from the tub and pours over the back three times. . . . 10 sec.
4. Then again rubs the back. . . . 20 sec.
5. Patient now lies down and the attendant rubs the legs. . . . 10 sec.
6. Time—1-3 min.
7. Repeat the above procedure once, for each min. of the bath.
8. Wrap in Turkish sheet and dry with vigorous rubbing.

Pail Douche (P dch) or Pail Pour (P p)

METHOD: "Hydrotherapy," p. 515.

1. Prepare three pailfuls of water; number 1 at 90 deg., number 2 at 80 deg., number 3 at 70 deg.
2. Cool head and neck and apply cold compress.
3. Patient stands in a hot foot bath with hands crossed over chest.
4. Pour one half of number 1 over one shoulder and the other half over the other shoulder. Apply in succession numbers 2 and 3.
5. The patient should rub his chest and arms vigorously while the attendant rubs his trunk and legs for 10 sec.
6. Wrap in Turkish sheet and dry thoroughly.

Ice Rubs (Ice r)

GENERAL DIRECTIONS:

1. Ice rubs are generally preceded by a fomentation or applications of the arc light or radiant heat, or some local or general heating application.
2. Ice rubbing should never be applied when the patient is chilly, and care must always be taken to avoid continuing the application so long as to chill the patient. It is well in many cases to apply a hot bag, radiant heat or a fomentation to the feet during the application, or to the spine when the rub is applied to the abdominal region.
3. For a general ice rub, or an ice rub to the spine, the patient must be wrapped in a Turkish sheet and a blanket.
4. Choose a smooth piece of ice the size of a large apple or a small cocoanut, and of convenient shape. A piece of cheesecloth may be wrapped about the upper part of the ice for convenience in holding.
5. Time—To a limited area should not be more than 15-30 sec., without renewing the hot application or allowing an interval for reaction.
6. The ice should be kept constantly and rapidly moving over the surface and may with advantage be immediately followed by the warm hand, and the application should always be made in a systematic manner.
7. At the end the skin surface should be well reddened.
8. *Effects and Indications:* The general purpose of the ice rub is to produce powerful revulsion. The ice rub to the back stimulates the spinal centers. Local ice rubs following thorough hot applications are excellent for

stimulating the absorption of exudates, relieving passive congestion, and as a revulsive measure for relief of deep-lying viscera, particularly the lungs, heart, stomach, spleen and bowels.

Local Ice Rubs

The whole procedure in each of the following local ice rubs should occupy about three min. when the surface is gone over once with the ice and two min. for each additional time the surface is gone over.

ICE RUB TO CHEST: (Ice R ch)

1. Cool the face and neck. Apply compress to the eyes and forehead.
2. Rub ice across the front and sides of the neck over the large vessels. . . . 4.
3. Rub across the chest above the clavicle over the top of the shoulder on each side. . . . 4.
4. Across the chest below the clavicle back and forth 4.
5. Up and down the sternum. . . . 4.
6. Small and large circles to the mammary region of each side. 4.
7. Hold ice for five sec. over the heart, at the middle of the sternum.
8. Dry and rub the surface for half a min.
9. The above procedures may be repeated 1-3 times.
10. Finish by percussion.

ICE RUB TO THE ABDOMEN: (Ice r abd)

1. Beginning at the lower end of the sternum, make rapid passes down the center and up the right side, then down the center and up the left side. . . . 4.
2. Circles over spleen (lower left chest). . . . 4.

3. Circles over stomach. 4.
4. Circles over liver (lower right chest. 4.
5. Small circles over umbilicus. 4.
6. Large circles over colon. 4.
7. The ice should be held for five sec. over the epigastrium, the umbilicus and each groin.
8. Dry and rub the surface for half a min.
9. The above procedures may be repeated one to three times.
10. Finish by percussion. 2.

ICE RUB TO PELVIC REGION:

1. Hot vaginal douche, hip pack, sitz or fomentation.
2. Apply ice. (1) over lower abdomen, from umbilicus to pubes; (2) hold over pubes for 5 sec.; (3) to groins and inside of thighs; (4) to front and outer side of thighs.
3. Dry and percuss.
4. Assist patient to turn, face downward.
5. Apply ice in circles (1) to sacral region; (2) to buttocks; (3) in rapid passes to back of thighs; (4) finish with holding ice for 5 sec. over anus and perineum.
6. Dry and percuss.

ICE RUB TO THE BACK: (Ice r blk)

1. Up and down each side of the neck in alternation 4.
2. Down the center the whole length of the spine from occiput to coccyx, up the right side, down the center, up left side. . . . 4.
3. Dry and give (1) alternate transverse rubbing or palm kneading to the back from neck to sacrum $\frac{1}{2}$ min. (2) alternate stroking the whole length of the spine.

4. The above procedures may be repeated 1-3 times.
5. Finish by percussion up and down first the right side, then the left side.2.

General Ice Rub (Gen Ice R)

To be used only after a general thorough hot application, as an electric light, vapor or Russian Bath.

CHEST: See Ice Rub to Chest.

ABDOMEN: See Ice Rub to Abdomen.

ARMS:

1. Grasping the patient's palm with the left hand, holding up the arm, rub the ice down and up the outside of the arm from the shoulder to the hand.4.
2. Down and up inside of arm.2.
3. Hold the ice for 5 sec. each in the axilla, the bend of the elbow and the palm of the hand.
4. * Down and up inside of arm.2.
5. Dry, rub and percuss.

LEGS: Anterior Surface.

1. Down and up outside of leg from hip to foot, long quick passes.4.
2. Same to inner surface.2.
3. Hold the ice in the groin over the femoral artery and vein, just below Poupart's ligament 5 sec.
4. Up and down inside leg.2.
5. Before drying the other leg, hold ice over the anus 5 sec.

BACK: See Ice Rub to Back, and Ice Rub to Pelvic Region.

Douches (D) and Sprays (spy)

1. Get thoroughly acquainted with the douche apparatus, dwelling particularly on the following:
 - a. How to quickly bring the douche to the required temperature.
 - b. How to perfectly control both temperature and pressure.
 - c. How to make all applications systematically and with a steady hand.
2. See that slippery floors in the douche rooms are covered and patients warned against the possibility of slipping and falling, especially on stepping out of the spray.
3. Carefully regulate the temperature and pressure before patient takes position.
4. The patient should wet the face occasionally during the application.
5. When making general application of the various forms of douche the whole surface must be gone over rapidly and repeatedly, the patient turning around frequently.
6. All applications, repeated or not, should if possible begin and end with the feet.
7. Always warn the patient before making a sudden change in the temperature.
8. For sprays and douches not included in the following classification and description, see "Hydrotherapy," pp. 426—522.

Classification

Spray	(Spy)	Given with needle spray.
Spray Douche	(Spy dch)	Given with horizontal spray.
Douche	(Dch)	Given with jet.
Percussion Douche	(Perc dch)	Given with special nozzle combining compressed air with the horizontal jet.

Each one of the above may be:

1. Cold	(C spy)	(C spy dch)	(C dch)	(C perc dch)
2. Cool	(Cool spy)	(Cool spy dch)	(Cool dch)	(Cool perc dch)
3. Neutral	(Neut spy)	(Neut spy dch)	(Neut dch)	(Neut perc dch)
4. Warm	(Spy)	(Spy dch)	(Dch)	(Perc dch)
5. Hot	(Spy)	(H spy dch)	(Ht dch)	(Ht perc dch)
6. Alternate	(Alt spy)	(Alt spy dch)	(Alt dch)	(Alt perc dch)
7. Revulsive	(Rev spy)	(Rev spy dch)	(Rev dch)	(Rev perc dch)

GENERAL REMARKS:

1. When prescribed as above it is understood that the application is to be to the whole body.

2. If the application is to be localized, the prescription will mention the parts in the order they are to be treated, as:

Hot Douche (dch) to stomach and liver.
 Revulsive douche (dch) to spine and legs.
 Revulsive spray douche (spy dch) to abdomen.
 Revulsive spray douche (spy dch) to perineum.
 Hot douche (dch) to rectum.

3. Local applications are usually followed by a short general spray or douche.

4. All applications whether general or local should be begun at about body temperature, then rapidly brought to the desired temperature.

5. The temperatures given in the following description are as usually prescribed, allowance of 2-10 deg. being made for the cooling of the water before it strikes the patient.

6. A spray or douche when not preceded by some other hydriatic application will generally be twice the duration given below.

7. In the alternate and revulsive applications one "change" represents one hot application followed by one cold.

8. If the number of changes is to be different than usual, the number will be indicated in the prescription. For instance: (Rev. perc spy legs—5).

The following directions will serve for all forms of general and local applications of the Spray and Douches:

COLD:

1. Begin at 102-105 deg. Time 10-20 sec.
2. Cool to 50-70 deg. Time 10-20 sec.

COOL:

1. Begin at 102-106 deg. Time 10-20 sec.
2. Cool to 70-80 deg. Time 20-60 seconds.

NEUTRAL:

1. Begin at 92-97 deg., and maintain the same temperature during the entire application.

1. Do not cool. Time 1-5 min.

WARM:

1. Begin at 102-106 deg. Time—30 sec.
2. Cool rapidly to 80-90 deg. Time 30 sec.

HOT:

1. Begin at 102-106 deg. Time 10 sec.
2. Gradually raise temperature to 110-125 deg. Time 30 sec.
3. Cool rapidly to 60-70 deg. Time 10 sec.

DIRECTIONS FOR LOCAL DOUCHES:

1. Temperature—The usual temperatures for local douches are the same as given above for general douches.
 2. For very brief applications, higher temperatures, 115-130 deg. may be used.
 3. Time—Duration is also the same as given above when the application is confined to a single area. Change for alternate or revulsive.
 4. If necessary, the time of local douches may be doubled.
 5. When several areas are to be treated successively, the duration for each area may be decreased, and in alt. or Rev. applications not more than five changes are usually made.
- The following will serve as a guide to all kinds of local applications of the various douches:
- REVULSIVE DOUCHE TO SPINE AND LEGS: (Rev. dch sp legs)
1. The attendant sits on a stool with the elbow resting on the thigh to insure steadiness of the hand used to manipulate the nozzle.
 2. The patient cools his face, neck and chest with the hands dipped in cold water, then stands feet close together and the back to the attendant.
 3. Begin at the feet and pass the stream up one leg and the spine, then down the spine and the other leg. Reverse.
 4. Give double time to the lower back and the feet.
 5. Hot, 102-106 deg. increased rapidly to 110-120 deg. 20 sec.
Change suddenly to cold, 45-60. 5-10 sec.
Change again to hot, 115-125 deg. 20 sec.

- Change again to cold 45-60 deg. 5-10 sec.
6. Patient now faces the attendant.
 7. Treat front of the feet and legs the same as the back.
 8. Finish with a few dashes of water at 100 deg. followed by water at 75-60 deg., over the whole body.

Vapor Douches

GENERAL DIRECTIONS: "Hydrotherapy," p. 515.

Applications of the vapor douche are usually local. The effects are more pronounced than those of the ordinary douche because higher temperatures may be employed.

1. Clear pipes of water from condensed steam.
2. Adjust valves so that vapor jet will have the desired temperature at 1½ or 2 feet from the nozzle.

VAPOR DOUCHE: (Vap dch)

1. Duration—1-3 min. or until the skin is well reddened.
2. Finish with a short cold application with the spray douche, affusion or ice rub.

ALTERNATE VAPOR DOUCHE: (Alt vap dch)

1. Alternate the application of vapor with some form of cold application every 5 or 10 sec.
2. Time—1-2 min.
3. End with cold.

REVULSIVE VAPOR DOUCHE: (Rev vap dch)

1. Vapor douche, 20 sec.
2. Cold douche or ice rub, 5-10 sec.
3. Make 3 changes ending with the cold.

Immersion Baths

GENERAL DIRECTIONS: "Hydrotherapy," pp. 522-600.

1. Draw enough water to cover the shoulders.
2. Make the patient comfortable in the tub, using an air pillow or some other suitable head rest. A large hot water bag partly filled with air or cool water will answer the purpose.
3. When giving a bath to a weak, emaciated patient, place a folded sheet under the hips to protect the lower back and hips. This is especially important for baths in which the patient is rubbed.
4. Cool the face and neck, and in feeble persons the chest also before the bath, and during all hot or cold baths, keep a cold compress on the head or neck, or both.
5. Hot baths should be started at 100 deg., then brought rapidly up to the prescribed temperature. Usually 102-108 degrees.
6. Use a reliable tested thermometer, never guess the temperature of a bath. The hand is not a reliable thermometer.

COOL OR COLD BATH: (Cb)

1. Temperature—50-75 deg.
2. Duration 4 sec., to 20 min. (Brand Bath)
3. Rub patient constantly. "Hydrotherapy," p. 527.

TEPID BATH:

1. Temperature—80-90 deg.
2. Time—10 min. to 1 hr.

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3. Rub patient at frequent intervals, or whenever goose flesh appears or chilly sensations are felt. Hydrotherapy p. 538.

NEUTRAL BATH: (Neut b)

1. Temperature—92-97 deg.
2. Duration—10 min. to several hours.
3. Avoid all mechanical effects.
4. Do not cool at end of bath.
5. Carefully avoid chilling by exposure to air after bath. Wrap in Turkish sheet and dry without rubbing. "Hydrotherapy," p. 548.

HOT BATH: (H b)

1. Patient should drink one or two glassfuls of hot water before bath and a glassful every 10 min.
2. Cold compress to the head and neck frequently changed.
3. Time—1-10 min.
4. Temperature—100 deg., gradually raised to 110 degrees.
5. The cooling treatment to finish must be applied without delay to avoid chilling.
6. Patient should not perspire after cool application.
7. Dry carefully, fanning skin until cool and firm. "Hydrotherapy," p. 539.

HOT HALF-BATH: (H $\frac{1}{2}$ b)

1. Patient sits in a tub with legs extended in the water up to the waist.
2. Temperature—as prescribed, may be at any temperature from 100-112-115 degrees.
3. Time—3-10 minutes.

4. Protect head and heart by large cool compresses to head, neck and chest, and change once in 3-4 min.

5. Finish as prescribed.

GRADUATED BATH: (Gr d b) p. 535.

1. Temperature—at beginning 3-4 deg. below the rectal temperature of the patient unless the skin is cold, in which case make the temperature 3-4 deg. above the rectal temperature for the first two minutes.

2. Reduce the temperature of the bath 2 deg. every 5 min., to 86 deg., not lower.

3. Rub patient constantly when the bath has been cooled to 92 deg., or sooner if the patient is chilly.

4. Take the temperature of the patient every fifteen minutes.

5. The bath should not be prolonged more than 20 min., after the lowest temperature is reached.

6. Remove the patient at once if lips or skin appear cyanotic, and rub well or apply heat if necessary.

7. Cover with Turkish sheet and blanket until good reaction is established. "Hydrotherapy," p. 535.

EFFERVESCENT OR NAUHEIM BATH:

Requisites:

1. A full bath, temperature 95 deg.

2. Drying sheet and sitz sheet.

3. Sodium carbonate. (Salsoda 1½ lbs.)

4. Calcium chloride—3 lbs.

6. Sodium chloride (common salt) 2 lbs.

7. Sodium bisulphate (acid) 1 lb.

(instead of the above, "Triton salts" or other prepared chemicals may be used according to accompanying directions.)

GENERAL DIRECTIONS:

1. Dissolve the calcium chloride in the tub in a few inches of hot water.

2. Put the sodium carbonate to dissolve in a pail half full of hot water.

3. When calcium chloride is dissolved, fill the tub, bringing water to the prescribed temperature and adding sodium chloride as the tub fills.

4. Now add the sodium bicarbonate and the solution of sodium carbonate.

5. Cool patient's face and neck and assist into the tub.

6. Drop the pieces of sodium bisulphate alongside the patient. Apply gentle friction to the limbs frequently during the bath.

7. Time—10-20 min.

8. Dry thoroughly with brisk friction. "Hydrotherapy," p. 562.

DIRECTIONS FOR USING TRITON SALTS:

1. Draw into the bath-tub sufficient water to immerse the body, about 40-50 gallons at a temperature that does not exceed 95 deg. F. Dissolve in this 5 lbs. of common salt, or sea salt, and also the bag of bicarbonate of soda contained in the box of Triton Bath Salts. This addition of sea salt is not essential, but is generally advised. We supply when ordered an easily dissolving sea salt in small crystals. Next, in order to prevent the bottom of the bath tub from possible injury by the acid cakes, take a piece of rubber sheeting of sufficient size to cover the bottom of the tub (about 18 inches by 4 ft.) and lay it on the floor of the tub. On this rubber sheeting place

the acid cakes, from the box of Triton Bath Salts, so that two shall be at the back, two on each side of the body and two under the knees. The bath is now complete. In about three min. when effervescence is well started, the patient may get into the tub and lie quietly, without unnecessary movements, for seven or eight min. If the rubber sheeting is not available (it may be obtained from the local druggist or from us) the lead foil provided in each box may be used, but the rubber is preferable. The course of baths should begin at a temperature of 95-93 deg. F., and should be of short duration from 5-7 min.

2. As each successive series is given, the temperature is gradually lowered, the duration slightly increased and more salt is added, so that at the end of a course of 24 baths the temperature, which in the first bath was 95 deg. F., is reduced to about 85 deg. or 86 deg., the duration prolonged from 5-20 min., and the proportion of salt increased from 5-15 lbs.

3. After the bath, it is an imperative rule to rest absolutely for at least an hour. Exercise may be taken before the bath, and massage applied if desired, but neither should be permitted immediately after the bath.

4. As to the bath-tub: In order to prevent an injury to the bath-tub by contact with the acid cakes there are three methods of procedure: 1st. Allow each cake to rest on the lead foil provided in our boxes. 2nd. Use three or four ordinary saucers and place the cakes on them. 3rd. Use a piece of rubber sheeting sufficient to cover the bottom of the bath-tub and put the cakes on the sheeting. The use of the rubber sheeting is advised as the most efficient and reliable method of protection.

Always allow the cakes to dissolve entirely before drawing off the water from the tub. The water is alkaline and will not injure the drain pipes.

SALINE BATH: (Sal b)

1. Sodium chloride 5-8 pounds to 30 gallons of water. "Hydrotherapy," p. 955.

MUSTARD BATH:

1. Steep 2 oz. of freshly ground mustard 10 min. in one qt. of hot water.
2. Add to a full bath, temperature of 92-94 deg., and stir well before patient enters. "Hydrotherapy," p. 956.

Sitz Bath (Z)

GENERAL DIRECTIONS: "Hydrotherapy," pp. 761-771.

1. The sitz bath is always accompanied by a hot foot bath.
2. Quantity—Sufficient water to cover the hips well.
3. Foot bath temperature 102-112 deg.
4. Cover the back and front edges of the tub with fomentation cloths.
5. Cover the patient and foot tub with a blanket or a sheet if the room is warm and the bath hot.
6. Apply cold compress to the head and neck.
7. If hot (102-108 deg.), start at 100 deg., then increase rapidly to the prescribed temperature.
8. After cooling application, dry thoroughly.

COLD SITZ: (C Z)

1. Temperature 55 deg., to 80 deg.
2. Time—1-15 min.
3. Have patient rub the hips to prevent chilling.
4. Indication—"Hydrotherapy," pp. 762-767.

COLD RUBBING SITZ: (C rbg Z)

1. Temperature—55-65 deg.
2. Time—4-15 min.
3. Rub the sides and hips vigorously during the bath while the patient rubs the abdomen. Friction mitts may be used.
4. Indication—"Hydrotherapy," p. 767.

NEUTRAL SITZ: (Neut. Z)

1. Temperature—92-97 deg. Foot bath, 102-106 deg.

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2. Time—15 min.-1 hour.
3. Indications—"Hydrotherapy," p. 770.

HOT SITZ: (H Z)

1. Temperature—100 deg. Heat rapidly to 106 deg.-115 deg.
2. Keep temperature of foot bath 1-2 deg. higher than that of the sitz.
3. Time—3-10 min.
4. Change compress to head and neck frequently.
5. Cool to 92 deg. for 3 min. at the close.
6. Finish with dash of cool water over chest and arms.
7. Indications—"Hydrotherapy," p. 769.

REVULSIVE SITZ: (Rev Z)

1. Temperature 100 deg. heat rapidly to 106-115 deg.
2. Temperature of foot bath 1-2 deg. higher than that of the sitz.
3. Time—3-8 min.
4. Finish by having patient stand in the sitz bath with back to attendant and dash a pailful of cold water 55-65 deg. over the hips.
5. Indications—"Hydrotherapy," p. 766-770.

GRADUATED SITZ: (Grad Z)

1. Temperature 105 deg.-110 deg. for from 2-5 min.
2. Cool to 90-95 deg. for 2 min.
3. Again cool to 60-70 deg. for $\frac{1}{2}$ to 1 min.

Electro-Hydric Baths

GENERAL DIRECTIONS: "Hydrotherapy," p. 945.

1. Make sure that all appliances are in good running order before the bath.

2. Do not manipulate switches or rheostat with dripping hands. All appliances must be kept absolutely dry and clean.

3. Place one electrode between the feet and the other at the head below the pillow. Movable electrodes can be placed in any other position as may be required.

4. The positive electrode should be placed at the head when the galvanic current is used. To determine which electrode is positive, place the electrodes half an inch apart in water and turn on the full current. Gas bubbles will be formed at each, but more freely at the negative pole. A better test is starch water containing a little iodide of potash. Wet some papers in the solution, dry and keep on hand. To apply the test, moisten a paper, then touch it with the ends of the two conducting wires. A blue spot appears at the positive pole. Their distinction does not exist with the sinusoidal current, which is alternating.

5. The Faradic current is seldom used. Its effects are tonic. This current is less agreeable and not so generally applicable as the sinusoidal. Electric shocks must be absolutely prevented.

The following precautions must be observed:

1. Test the current before the patient enters the bath.

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2. Be sure the switch is off and the rheostat at zero when the patient enters the bath.

3. Turn on the switch first, then slowly advance the rheostat.

4. When the time is up, turn the rheostat down to zero, then open the switch. Be sure to do this before the patient leaves the bath.

5. The rheostat must be kept dry. A drop of water falling on it might give the patient a severe shock.

SINUSOIDAL ELECTRIC BATH: (E)

It is generally understood by Sanitarium physicians and attendants that in hydriatic prescriptions "E" stands for sinusoidal electric bath.

Method:

1. Temperature usually 96-98 deg. at start.

2. With the electrodes in position, have the patient enter the bath.

3. If the head is hot place a cold compress to the head and neck.

4. See that the rheostat is turned down to zero and is dry. Adjust the switches and start the motor.

5. Turn the current on gradually at the rheostat until the patient feels it distinctly but not sufficiently strong to cause contraction of the muscles, or any other sensation than a slight quivering.

6. Gradually lower the temperature to 92 deg.

7. Duration—Usually from 10-15 min.

8. At the close slowly turn the current off at the rheostat, then stop the motor.

9. Cool the bath and take the patient out.

10. The neutral electric bath should not be cooled, especially when given at night.

11. On beginning work each morning, examine the apparatus carefully to see that everything is all right. Always test the bath with the hands before putting the patient in, turning on the current for the purpose, then turn it off before the patient enters the tub.

Swedish Shampoo (S sh)

GENERAL DIRECTIONS:

1. The Swedish Shampoo is ordinarily given on a slab, but may be given in a bath tub.

2. Use the shampoo brush or a mass of curled hair, or a loofah. Boil after each treatment.

SHAMPOO IN THE TUB:

1. The patient sits on a covered wooden stool in the tub, and is protected with a sheet. Temperature of tub 98 deg.

2. First go over the lower extremities with soap and brush. Work rapidly and thoroughly. Next scrub the arms, chest, abdomen, and back. Finally shampoo the hips while the patient stands.

3. Remove the stool to allow the patient to lie down in the water to remove the soap.

4. Graduated shower, spray or Pail Pour.

5. Dry with Turkish Sheet.

SHAMPOO ON THE SLAB:

1. Preparations—Pailful of water at 100 deg. on a wooden stool near the head of the slab.

2. See that slab and room are warm. Turn hot water on the floor, as well as on the slab.

3. Cover the slab and air pillow with a sheet folded.

4. Assist the patient to lie down and, after first covering the whole anterior surface with a liberal amount of soap lather, apply brush with short quick strokes to neck, chest, arms, abdomen, legs. Give special attention

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to hairy parts. Do not neglect ears, finger tips, toes and heels and knees.

5. If the patient is feeble, assist in turning over on the slab in the following manner: Slip one arm under the neck and grasp the opposite shoulder with the hand. Slip the other arm under the near leg and grasp the other above the knee, then with a quick movement turn the patient, standing close to the slab to prevent the patient from slipping off.

6. Shampoo the back, hips, legs and soles of the feet.

7. The patient may be covered during the treatment in which case apply the soap to each part in succession.

8. Pour water left in the pail over the patient to rinse off the soap before assisting the patient to the spray.

9. Caution the patient against slipping, and keep hold of his arm.

Soap Wash

GENERAL DIRECTIONS:

1. Two pails full of water, one at 102 deg., the other 75-85 deg.

2. Good soap, three Turkish towels, and two wash cloths.

3. Dip the soap and wash cloth in hot water and proceed as in the shampoo except that after thorough washing, each part is rinsed and cooled with water at 75-85 deg., then dried.

4. Neglect no part of the body.

DISINFECTANT SOAP WASH:

GENERAL DIRECTIONS:

1. Two pails full of water one at 140-150 deg; the other 90 deg.

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2. Good yellow soap and two wash cloths.
3. Rub the whole anterior surface with the bar of soap after dipping in hot water. Give special attention to hairy surfaces, arm-pits, groins, pubes, genitals, anal region, elbows, knees, finger-tips, heels, toes.
4. Turn the patient over and soap the back and hips.
5. The soap must be allowed to remain on the skin at least 10 min. before it is carefully rinsed off with a cloth or preferably with a large soft sponge, water at 90 degrees.
6. Used in cases of typhoid and other infectious diseases in which it is important to disinfect the skin. Soap is a good skin disinfectant.

Salt Glow (S gl)

GENERAL DIRECTIONS: "Hydrotherapy," p. 641.

1. The salt glow is given on a slab or in a bath tub, or with patient standing or sitting with the feet in hot water.
2. Moisten the salt slightly with cold water.
3. The order of application is usually the following:
Feet and legs, arms, front and back of trunk simultaneously, sides and hips.
4. Proceed systematically with rapid friction, carefully and quickly going over each part with an even pressure which is modified according to the patient. Rub gently over sensitive parts and bony prominences.
5. The application is preferably made with the bare hands, but friction mitts may be used.
6. Time—2-3 minutes.
7. Follow immediately by a spray, pail pour, or dip in the tub, using water at 98 degrees; cooling 70-80 deg.

